



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 186543

**TO: Amanda Walke**  
**Location: REM 9D64**  
**Art Unit : 1752**  
**May 5, 2006**

**Case Serial Number: 10/789600**

**From: Mei Huang**  
**Location: EIC 1700**  
**REMSSEN 4B28**  
**Phone: 571/272-3952**  
**Mei.huang@uspto.gov**

## Search Notes

Examiner Walke,

Please feel free to contact me if you have any questions or if you would like to refine the search query,

Thank you for using STIC services!

Mei Huang



Access DB# 186513

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Amanda Warka Examiner #: 75063 Date: 4/18/06  
Art Unit: 1752 Phone Number: 301-272-1331 Serial Number: 10/050100 789600  
Mail Box and Bldg/Room Location: PER 9D64 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bib Sheet Attached

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for a compound having a ~~base~~ nitrogen bond accepting group as in claim 1. If needed, please limit A as described by the instant claim 2.  
Thank You.

SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Cntr.

APR 21 REC.

Pat. & T.M. Office

## STAFF USE ONLY

Searcher: MQH  
Searcher Phone #: \_\_\_\_\_  
Searcher Location: \_\_\_\_\_  
Date Searcher Picked Up: \_\_\_\_\_  
Date Completed: 5/5/06  
Searcher Prep & Review Time: \_\_\_\_\_  
Clerical Prep Time: \_\_\_\_\_  
Online Time: \_\_\_\_\_

### Type of Search

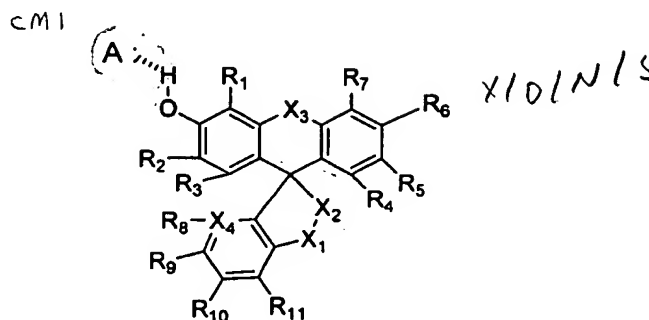
NA Sequence (#) \_\_\_\_\_  
AA Sequence (#) \_\_\_\_\_  
Structure (#) 2  
Bibliographic (Sub Set)  
Litigation \_\_\_\_\_  
Fulltext \_\_\_\_\_  
Patent Family \_\_\_\_\_  
Other \_\_\_\_\_

### Vendors and cost where applicable

STN ☒ \_\_\_\_\_  
Dialog \_\_\_\_\_  
Questel/Orbit \_\_\_\_\_  
Dr. Link \_\_\_\_\_  
Lexis/Nexis \_\_\_\_\_  
Sequence Systems \_\_\_\_\_  
WWW/Internet \_\_\_\_\_  
Other (specify) \_\_\_\_\_

What is claimed is:

1. A compound represented by the formula



(I)

wherein:

$R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ , and  $R_7$  are each independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur;

$R_6$  is selected from the group consisting of halogen, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur;

$R_8$ ,  $R_9$ ,  $R_{10}$  and  $R_{11}$  are each independently absent or selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl,

alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur;

X<sub>1</sub> is selected from the group consisting of carbonyl, methylene, substituted methylene, and sulfonyl; C/S

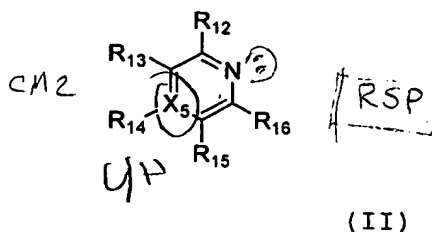
X<sub>2</sub> is selected from the group consisting of oxygen, nitrogen, or substituted nitrogen; O/N

X<sub>3</sub> is selected from the group consisting of oxygen, sulfur, nitrogen and substituted nitrogen; O/S/N

X<sub>4</sub> is carbon or nitrogen; and C/N

A is a hydrogen-bond accepting group.

2. A compound according to Claim 1 wherein A is a radical of a compound represented by the formula



wherein:

R<sub>12</sub>, R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub> are each independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl,



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

=> fil reg

FILE 'REGISTRY' ENTERED AT 12:57:59 ON 05 MAY 2006

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=> d his

(FILE 'HOME' ENTERED AT 11:05:09 ON 05 MAY 2006)

FILE 'HCAPLUS' ENTERED AT 11:05:22 ON 05 MAY 2006

E US20040171817/PN

L1 1 S E3  
SEL RN

FILE 'REGISTRY' ENTERED AT 11:06:41 ON 05 MAY 2006

L2 35 S E1-35  
L3 STR  
L4 STR L3  
L5 STR L4  
L6 7764 S L5 FUL  
SAV L6 WAL600/A  
L7 1382 S L6 AND 1<NC  
L8 STR L5  
L9 STR  
L10 178 S (L8 AND L9) FUL SUB=L6  
L11 44 S L10 AND 1<NC  
L12 18 S L2 AND L11

FILE 'HCAPLUS' ENTERED AT 12:49:06 ON 05 MAY 2006

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L14 1 S L12

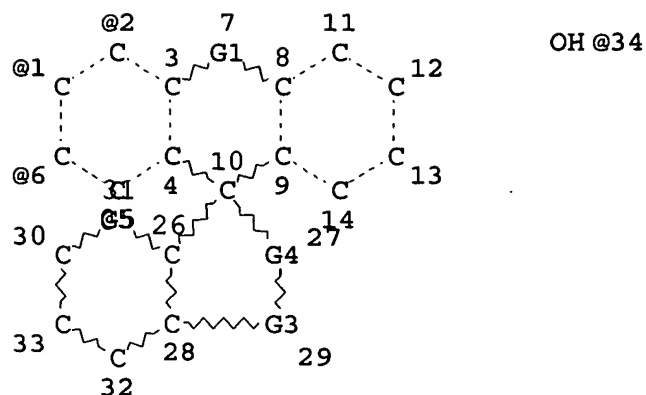
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L15 0 S L11

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=> d l11 que stat

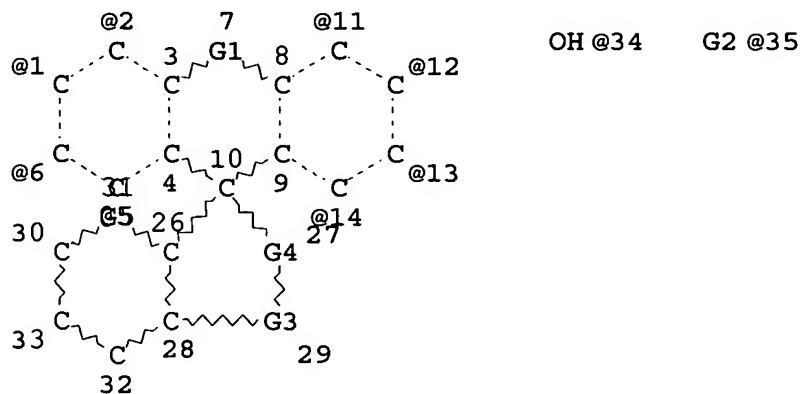
L5 STR



VAR G1=O/S/N  
 VAR G3=C/S  
 VAR G4=O/N  
 VAR G5=C/N  
 VPA 34-2/1/6/5 U  
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 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
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 NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE  
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 L8 STR

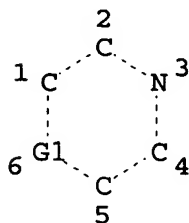


VAR G1=O/S/N  
 VAR G2=X/O/N/S  
 VAR G3=C/S  
 VAR G4=O/N  
 VAR G5=C/N

VPA 34-2/1/6/5 U  
VPA 35-11/12/13/14 U  
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DEFAULT MLEVEL IS ATOM  
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GRAPH ATTRIBUTES:  
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STEREO ATTRIBUTES: NONE  
L9 STR



VAR G1=C/N  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
L10 178 SEA FILE=REGISTRY SUB=L6 SSS FUL (L8 AND L9)  
L11 44 SEA FILE=REGISTRY L10 AND 1<NC

=> fil hcap  
FILE 'HCAPLUS' ENTERED AT 12:58:14 ON 05 MAY 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

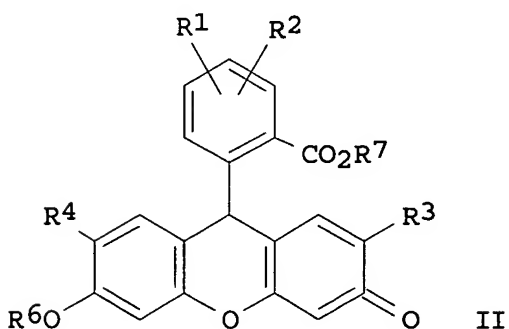
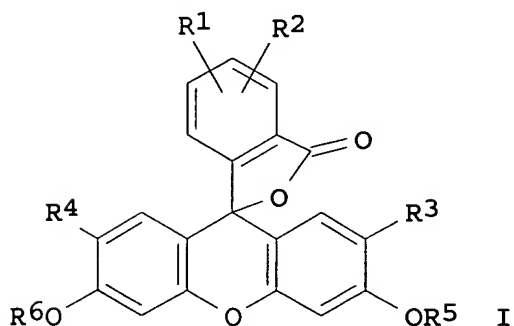
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L13 ANSWER 1 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:957377 HCAPLUS  
DOCUMENT NUMBER: 141:391530  
TITLE: Fluorescein derivatives, zinc fluorescent probes  
containing them, their zinc complexes,  
determination of zinc using the probes, and zinc  
determination kits  
INVENTOR(S): Komatsu, Kensuke; Hirano, Tomoya; Kikuchi,

PATENT ASSIGNEE(S): Kazuya; Nagano, Tetsuo  
SOURCE: Daiichi Pure Chemical Co., Ltd., Japan  
Jpn. Kokai Tokkyo Koho, 25 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004315501	A2	20041111	JP 2004-16836	200401 26
US 2005037332	A1	20050217	US 2004-767334	200401 30
PRIORITY APPLN. INFO.:			JP 2003-89987	A 200303 28

OTHER SOURCE(S): MARPAT 141:391530  
GI



AB Zn ion is detd. by (a) reacting Zn ion with the derivs. I or II [R1, R2 = H, (NX4CH2CH2)n(NX3CH2CH2)mNX1X2 (X1-X4 = H, 2-pyridylmethyl, 2-pyridylethyl, 2-methyl-6-pyridylmethyl, 2-methyl-6-pyridylethyl;  $\geq 1$  of X1-X4 = 2-pyridylethyl, 2-methyl-6-pyridylmethyl, 2-methyl-6-pyridylethyl; m, n = 0, 1; m and/or n = 1); R1 and/or R2 = substituent; R3, R4 = H, halo; R5, R6 = H, alkylcarbonyl, alkylcarbonyloxymethyl; R7 = H, alkyl] or their salts and (b) measuring fluorescence intensity of the resulting Zn complexes. Zn detn. kits contg. I, II, or their salts, wherein definitions of variables are further restricted, are also claimed. Thus, CHO cells were preincubated with I [R1 = H, R2 = 6-[2-[bis[2-(2-pyridyl)ethyl]amino]ethyl], R3 = R4 = H, R5 = R6 = Ac] (prepn. given) and treated with a reagent contg. pyridithione and ZnSO4 to show fluorescence intensity in a manner dependent on Zn concn.

IT 790235-35-7P 790235-39-1P 790235-42-6P

790235-47-1P 790235-51-7P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(prepn. of fluorescein derivs. as fluorescent probes for detn. of Zn)

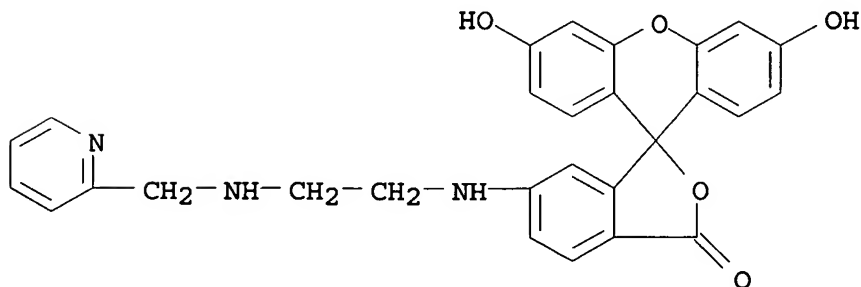
RN 790235-35-7 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-6-[[2-[(2-pyridinylmethyl)amino]ethyl]amino]-, tris(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 790235-34-6

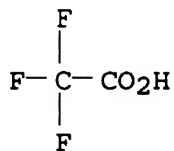
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CM 2

CRN 76-05-1

CMF C2 H F3 O2



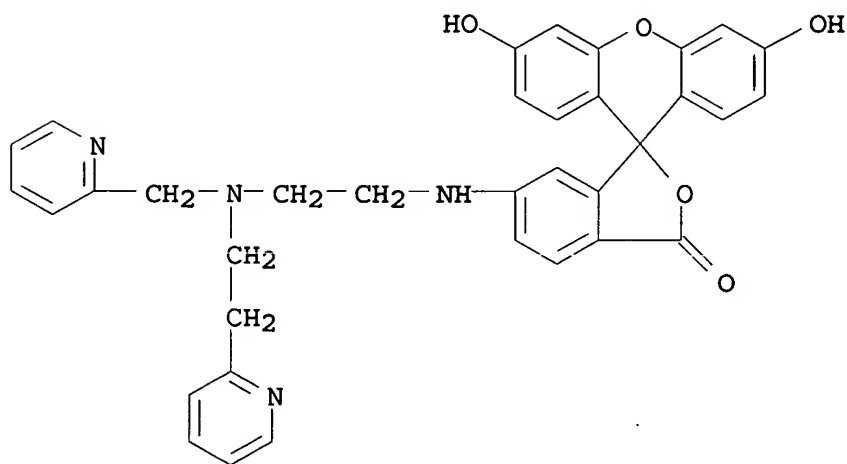
RN 790235-39-1 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9' - [9H]xanthen] -3-one,  
3',6'-dihydroxy-6-[[2-[[2-(2-pyridinyl)ethyl](2-  
pyridinylmethyl)amino]ethyl]amino]-, tetrakis(trifluoroacetate)  
(salt) (9CI) (CA INDEX NAME)

CM 1

CRN 790235-38-0

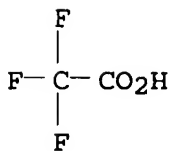
CMF C35 H30 N4 O5



CM 2

CRN 76-05-1

CMF C2 H F3 O2



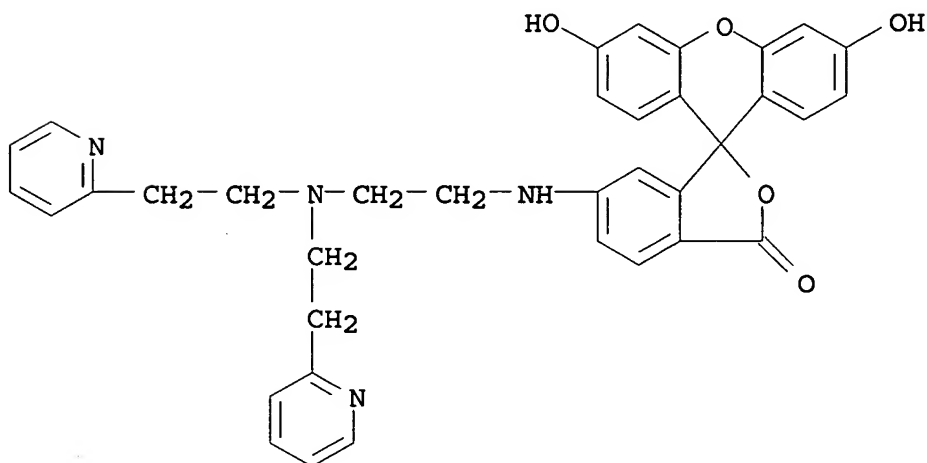
RN 790235-42-6 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
6-[[2-[bis[2-(2-pyridinyl)ethyl]amino]ethyl]amino]-3',6'-dihydroxy-,  
tetrakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 790235-41-5

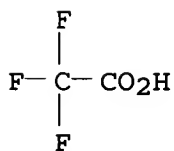
CMF C36 H32 N4 O5



CM 2

CRN 76-05-1

CMF C2 H F3 O2



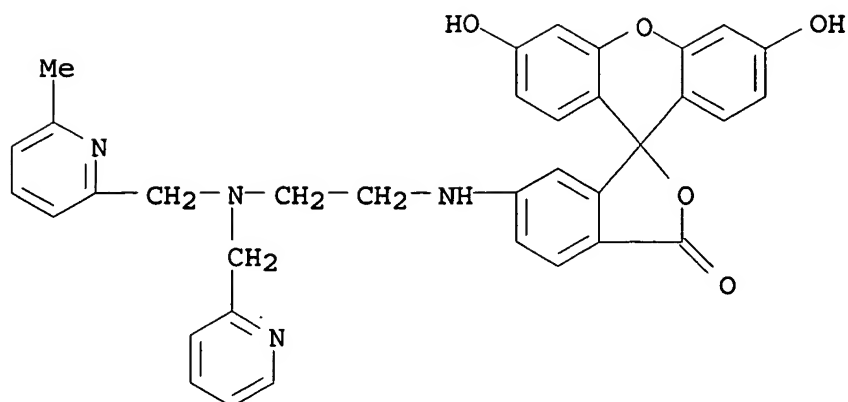
RN 790235-47-1 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
3',6'-dihydroxy-6-[[2-[[[(6-methyl-2-pyridinyl)methyl](2-  
pyridinylmethyl)amino]ethyl]amino]-, tetrakis(trifluoroacetate)  
(salt) (9CI) (CA INDEX NAME)

CM 1

CRN 790235-46-0

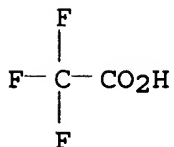
CMF C35 H30 N4 O5



CM 2

CRN 76-05-1

CMF C2 H F3 O2



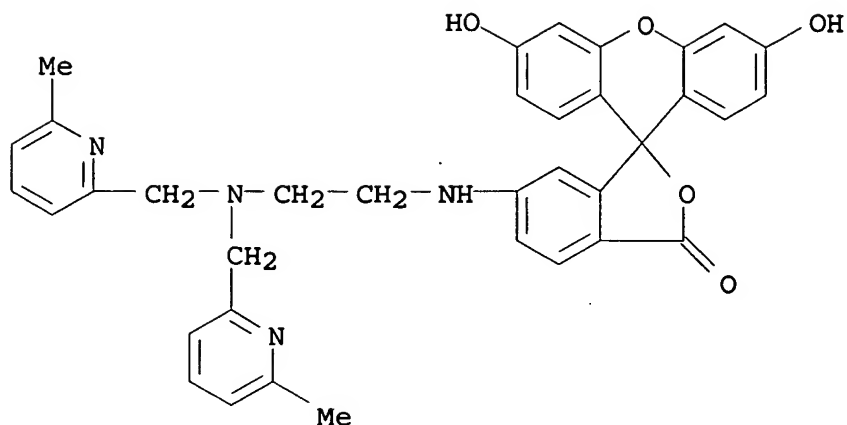
RN 790235-51-7 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthen] -3-one,  
6-[[2-[bis[(6-methyl-2-pyridinyl)methyl]amino]ethyl]amino] -3',6'-  
dihydroxy-, tetrakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 790235-50-6

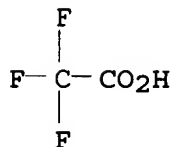
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CM 2

CRN 76-05-1

CMF C2 H F3 O2



IC ICM C07D405-12  
 ICS C07D405-14; C07D493-10; G01N021-78  
 CC 9-5 (Biochemical Methods)  
 Section cross-reference(s): 27  
 IT 790235-35-7P 790235-39-1P 790235-42-6P  
 790235-47-1P 790235-51-7P 790235-52-8P  
 RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST  
 (Analytical study); PREP (Preparation); USES (Uses)  
 (prepn. of fluorescein derivs. as fluorescent probes for detn. of  
 Zn)

L13 ANSWER 2 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:722950 HCAPLUS

DOCUMENT NUMBER: 141:244924

TITLE: Dye compounds exhibiting different colors in  
 crystalline form and in liquid form and their  
 use in imaging members and imaging method  
 INVENTOR(S): Allen, Richard M.; Filosa, Michael P.; Telfer,  
 Stephen J.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

*The current  
 Application*

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2004171817	A1	20040902	US 2004-789600	200402 27
US 2004176617	A1	20040909	US 2004-789276	200402 27
US 6951952	B2	20051004		
US 2004176248	A1	20040909	US 2004-789648	200402 27
CA 2515507	AA	20040916	CA 2004-2515507	200402 27
WO 2004078874	A2	20040916	WO 2004-US5964	200402 27
WO 2004078874	A3	20041104		
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WO 2004078479 A2 20040916 WO 2004-US5986

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WO 2004078479 A3 20041028

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WO 2004078030 A2 20040916 WO 2004-US6109

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WO 2004078030 A3 20041028

WO 2004078030 B1 20041216

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US 2004191668 A1 20040930 US 2004-788963

200402  
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US 7008759 B2 20060307

US 2004204317 A1 20041014 US 2004-789566

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EP 1597084 A2 20051123 EP 2004-715701

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PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
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PRIORITY APPLN. INFO.:

US 2003-451208P P

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28

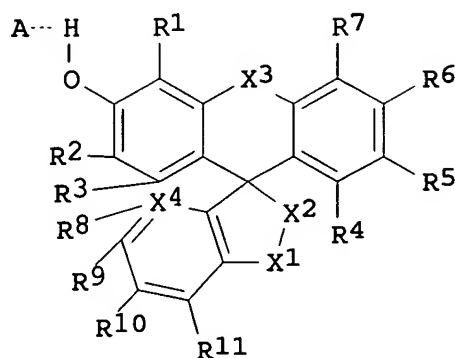
WO 2004-US5986

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200402

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OTHER SOURCE(S): MARPAT 141:244924  
GI



I

AB The dye compd. I (R1-5, R7 = H, (un)substituted alkyl, (un)substituted alkenyl, (un)substituted alkynyl, (un)substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, (un)substituted heteroaryl, (un)substituted oxygen, (un)substituted nitrogen, and (un)substituted sulfur; R6 = halogen, (un)substituted oxygen, (un)substituted nitrogen and (un)substituted sulfur; R8-11 = H, (un)substituted alkyl, (un)substituted alkenyl, (un)substituted alkynyl, (un)substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, (un)substituted heteroaryl, (un)substituted oxygen, (un)substituted nitrogen and (un)substituted sulfur; X1 = carbonyl, methylene, substituted methylene and sulfonyl; X2 = oxygen, (un)substituted nitrogen; X3 = oxygen, sulfur and (un)substituted nitrogen; X4 = carbon, nitrogen; and A = hydrogen-bond accepting group) are formed between hydrogen bond acceptors and phenolic dye compds. The imaging method comprises (a) providing an imaging member comprising a first image-forming layer including the dye compd. in the cryst. form; and (b) converting at least a portion of the compd. to the liq. form in an imagewise pattern whereby an image is formed.

IT 748802-91-7 748802-93-9 748802-95-1  
748802-97-3 748802-99-5 748803-01-2  
748803-03-4 748803-05-6 748803-07-8  
748803-09-0 748803-11-4 748803-13-6  
748803-15-8 748803-17-0 748803-19-2  
748803-21-6 748803-23-8 748803-39-6

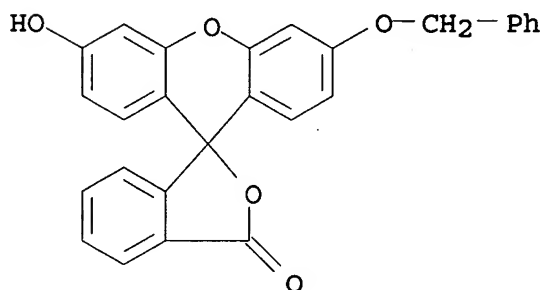
RL: TEM (Technical or engineered material use); USES (Uses)  
(dye compds. exhibiting different colors in cryst. form and in  
liq. form for imaging members)

RN 748802-91-7 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
3'-hydroxy-6'-(phenylmethoxy)-, compd. with 4,4'-bipyridine (2:1)  
(9CI) (CA INDEX NAME)

CM 1

CRN 327594-34-3

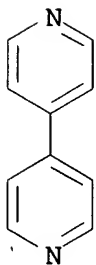
CMF C27 H18 O5



CM 2

CRN 553-26-4

CMF C10 H8 N2

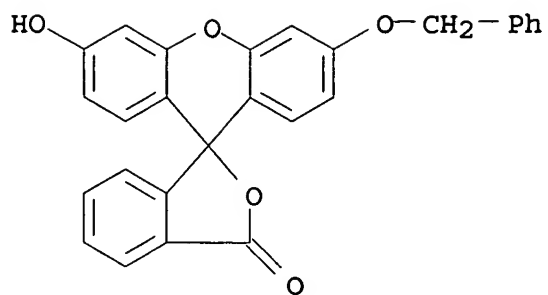


RN 748802-93-9 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
3'-hydroxy-6'-(phenylmethoxy)-, compd. with pyrazine (1:1) (9CI)  
(CA INDEX NAME)

CM 1

CRN 327594-34-3

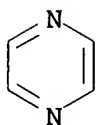
CMF C27 H18 O5



CM 2

CRN 290-37-9

CMF C4 H4 N2



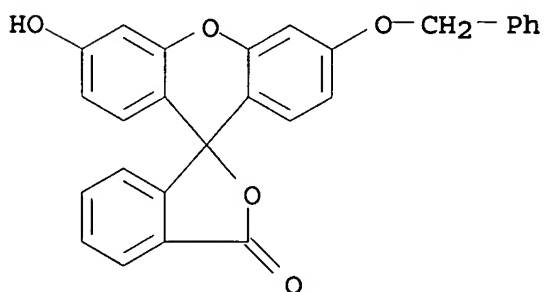
RN 748802-95-1 HCAPLUS

CN 2-Pyridinecarboxylic acid, ethyl ester, compd. with  
3'-hydroxy-6'-(phenylmethoxy)spiro[isobenzofuran-1(3H),9'-  
[9H]xanthen]-3-one (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 327594-34-3

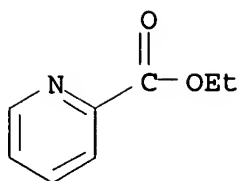
CMF C27 H18 O5



CM 2

CRN 2524-52-9

CMF C8 H9 N O2



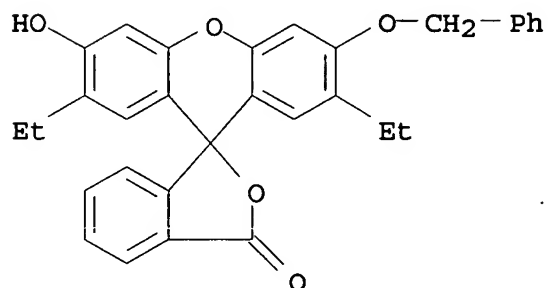
RN 748802-97-3 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthen] -3-one,  
2',7'-diethyl-3'-hydroxy-6'-(phenylmethoxy)-, compd. with  
4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748802-96-2

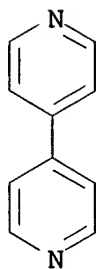
CMF C31 H26 O5



CM 2

CRN 553-26-4

CMF C10 H8 N2



RN 748802-99-5 HCAPLUS

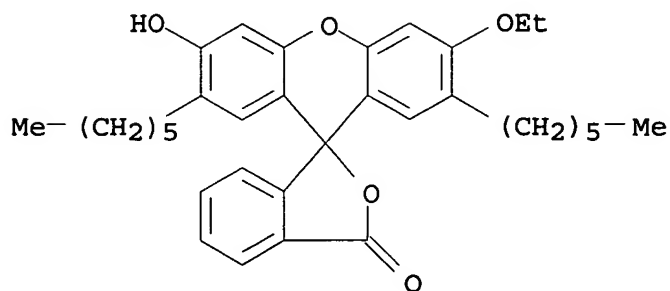
CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthen] -3-one,

3'-ethoxy-2',7'-dihexyl-6'-hydroxy-, compd. with 4,4'-bipyridine  
(2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748802-98-4

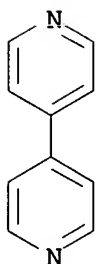
CMF C34 H40 O5



CM 2

CRN 553-26-4

CMF C10 H8 N2



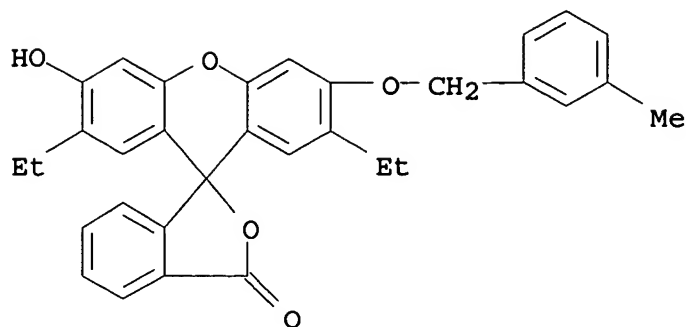
RN 748803-01-2 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
2',7'-diethyl-3'-hydroxy-6'-[(3-methylphenyl)methoxy]-, compd. with  
4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748803-00-1

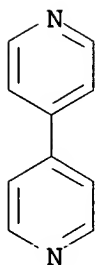
CMF C32 H28 O5



CM 2

CRN 553-26-4

CMF C10 H8 N2



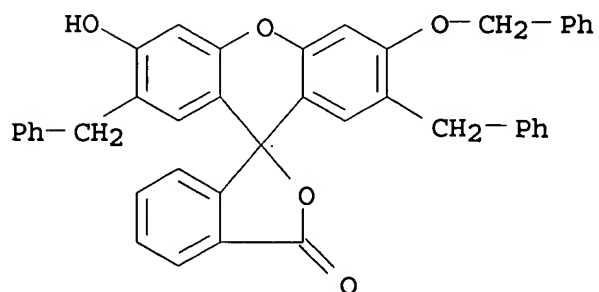
RN 748803-03-4 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9' - [9H] xanthen] -3-one,  
3'-hydroxy-6' - (phenylmethoxy) -2',7' -bis(phenylmethyl) -, compd. with  
4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748803-02-3

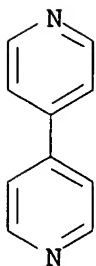
CMF C41 H30 O5



CM 2

CRN 553-26-4

CMF C10 H8 N2



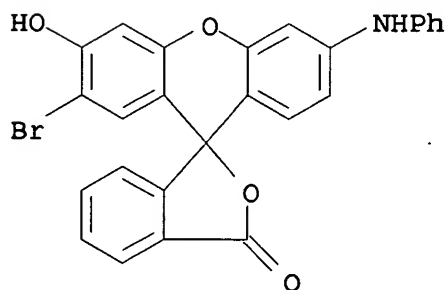
RN 748803-05-6 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
2'-bromo-3'-hydroxy-6'-(phenylamino)-, compd. with 4,4'-bipyridine  
(2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748803-04-5

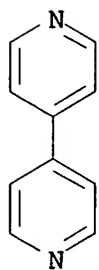
CMF C26 H16 Br N O4



CM 2

CRN 553-26-4

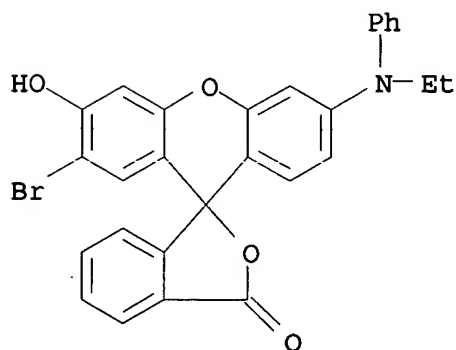
CMF C10 H8 N2



RN 748803-07-8 HCAPLUS  
 CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
 2'-bromo-6'-(ethylphenylamino)-3'-hydroxy-, compd. with  
 4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

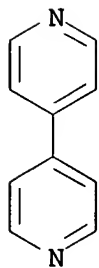
CM 1

CRN 748803-06-7  
 CMF C28 H20 Br N O4



CM 2

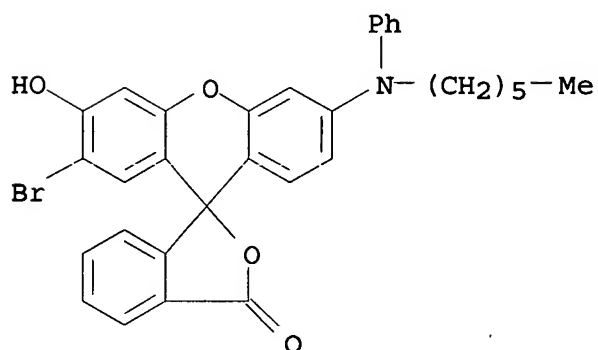
CRN 553-26-4  
 CMF C10 H8 N2



RN 748803-09-0 HCAPLUS  
 CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
 2'-bromo-6'-(hexylphenylamino)-3'-hydroxy-, compd. with  
 4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

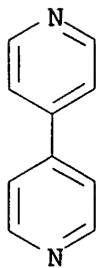
CM 1

CRN 748803-08-9  
 CMF C32 H28 Br N O4



CM 2

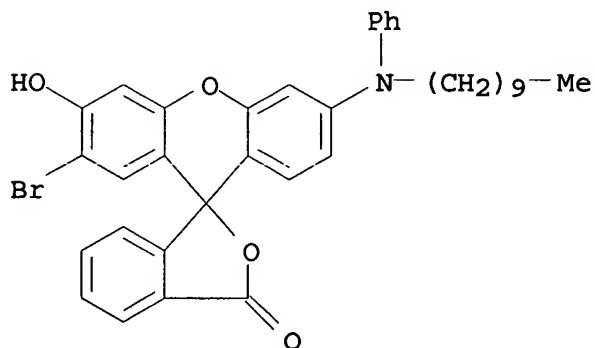
CRN 553-26-4  
 CMF C10 H8 N2



RN 748803-11-4 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
2'-bromo-6'-(decylphenylamino)-3'-hydroxy-, compd. with  
4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

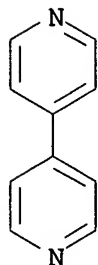
CM 1

CRN 748803-10-3  
CMF C36 H36 Br N O4



CM 2

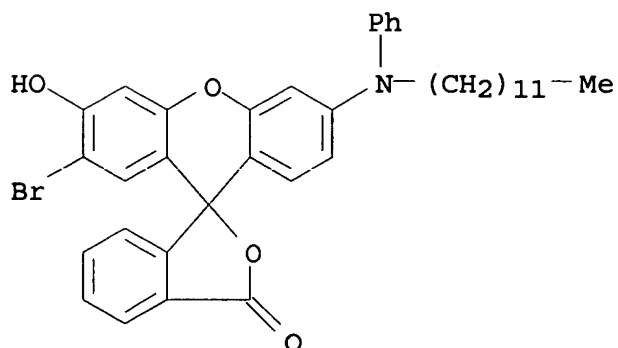
CRN 553-26-4  
CMF C10 H8 N2



RN 748803-13-6 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
2'-bromo-6'-(dodecylphenylamino)-3'-hydroxy-, compd. with  
4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

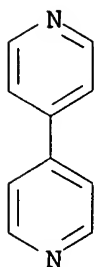
CM 1

CRN 748803-12-5  
CMF C38 H40 Br N O4



CM 2

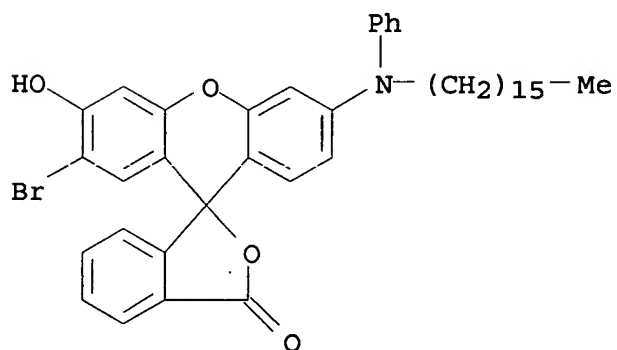
CRN 553-26-4  
CMF C10 H8 N2



RN 748803-15-8 HCAPLUS  
 CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
 2'-bromo-6'-(hexadecylphenylamino)-3'-hydroxy-, compd. with  
 4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

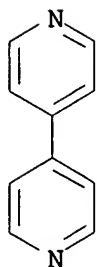
CM 1

CRN 748803-14-7  
 CMF C42 H48 Br N O4



CM 2

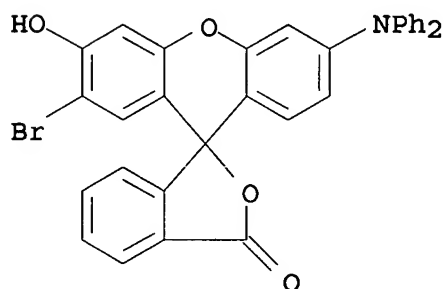
CRN 553-26-4  
 CMF C10 H8 N2



RN 748803-17-0 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
2'-bromo-6'-(diphenylamino)-3'-hydroxy-, compd. with 4,4'-bipyridine  
(2:1) (9CI) (CA INDEX NAME)

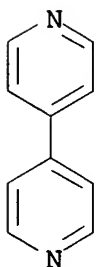
CM 1

CRN 748803-16-9  
CMF C32 H20 Br N O4



CM 2

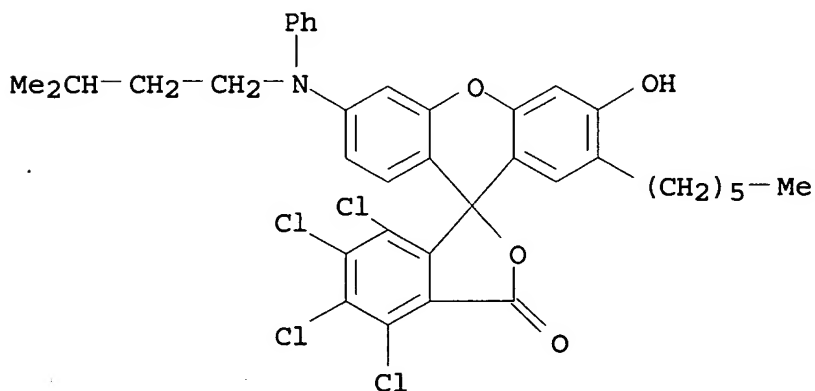
CRN 553-26-4  
CMF C10 H8 N2



RN 748803-19-2 HCAPLUS  
 CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthen] -3-one,  
 4,5,6,7-tetrachloro-2'-hexyl-3'-hydroxy-6'-[(3-  
 methylbutyl)phenylamino]-, compd. with 4,4'-bipyridine (2:1) (9CI)  
 (CA INDEX NAME)

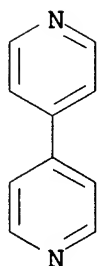
CM 1

CRN 748803-18-1  
 CMF C37 H35 Cl4 N O4



CM 2

CRN 553-26-4  
 CMF Cl0 H8 N2

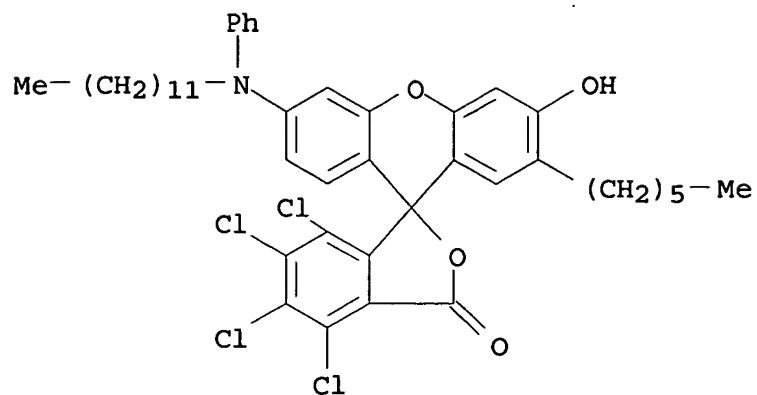


RN 748803-21-6 HCAPLUS  
 CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthen] -3-one,  
 4,5,6,7-tetrachloro-6'-(dodecylphenylamino)-2'-hexyl-3'-hydroxy-,  
 compd. with 4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748803-20-5

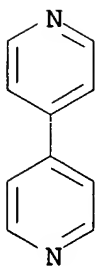
CMF C44 H49 Cl4 N O4



CM 2

CRN 553-26-4

CMF C10 H8 N2



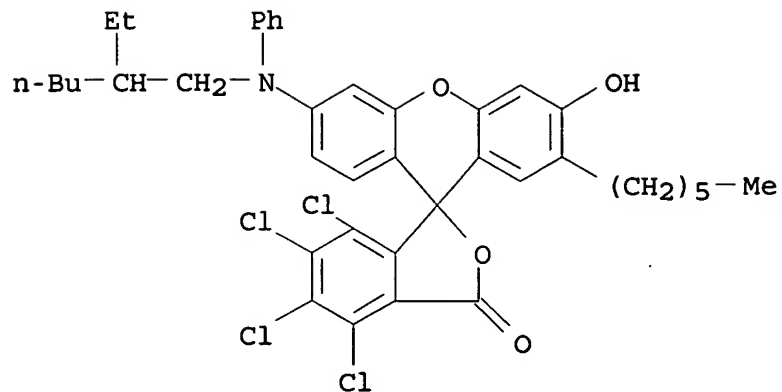
RN 748803-23-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
4,5,6,7-tetrachloro-6'-[(2-ethylhexyl)phenylamino]-2'-hexyl-3'-  
hydroxy-, compd. with 4,4'-bipyridine (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748803-22-7

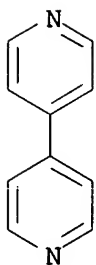
CMF C40 H41 Cl4 N O4



CM 2

CRN 553-26-4

CMF C10 H8 N2



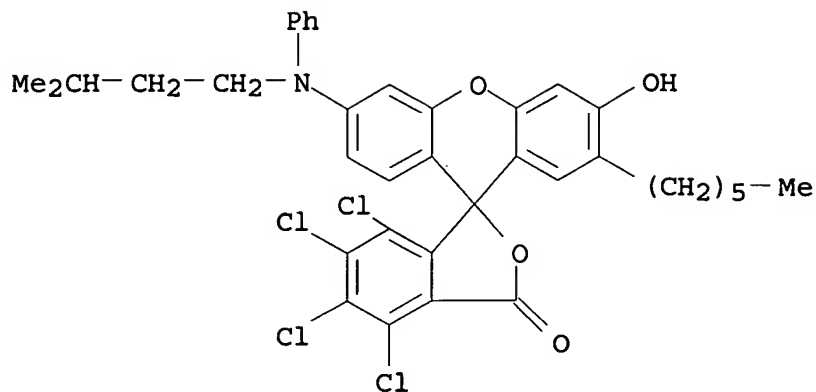
RN 748803-39-6 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
4,5,6,7-tetrachloro-2'-hexyl-3'-hydroxy-6'-[(3-  
methylbutyl)phenylamino]-, compd. with 4,4'-(1,2-  
ethenediyl)bis[pyridine] (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 748803-18-1

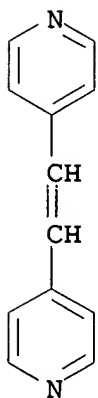
CMF C37 H35 Cl4 N O4



CM 2

CRN 1135-32-6

CMF C12 H10 N2



IC ICM C09B056-00

ICS G03C005-18

INCL 534653000; 156235000; 430151000

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

IT 748802-87-1 748802-89-3 748802-91-7 748802-93-9

748802-95-1 748802-97-3 748802-99-5

748803-01-2 748803-03-4 748803-05-6

748803-07-8 748803-09-0 748803-11-4

748803-13-6 748803-15-8 748803-17-0

748803-19-2 748803-21-6 748803-23-8

748803-25-0 748803-26-1 748803-27-2

748803-28-3

748803-29-4

748803-30-7 748803-31-8 748803-32-9

748803-33-0

748803-34-1

748803-35-2 748803-36-3 748803-37-4

748803-38-5

748803-39-6 748803-40-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(dye compds. exhibiting different colors in cryst. form and in  
liq. form for imaging members)

L13 ANSWER 3 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:387493 HCAPLUS

DOCUMENT NUMBER: 141:362446

TITLE: Fluorescence detection of redox-sensitive metals  
in neuronal culture: Focus on iron and zinc

AUTHOR(S): Reynolds, Ian J.

CORPORATE SOURCE: Department of Pharmacology, University of  
Pittsburgh, Pittsburgh, PA, USA

SOURCE: Annals of the New York Academy of Sciences  
(2004), 1012, 27-36

CODEN: ANYAA9; ISSN: 0077-8923

PUBLISHER: New York Academy of Sciences

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Detection of neurotoxic metals in the intracellular milieu has made an important contribution to the understanding of the mechanism of metal-induced neuronal injury. Fluorescent, metal-sensitive dyes have proven to be valuable in the measurement of a variety of neurotoxic cations in neurons, and these dyes have provided a no. of insights into the relationships between elevations in the cytosolic free-metal concns. and neuronal death. However, the dyes also have important limitations that can make the interpretation of dye signals difficult. In this review, the characteristics of dyes that can be used to detect both iron and zinc inside neurons, and the methods necessary to distinguish these ions from other intracellular signals, are reviewed. Also provided are examples of the use of the dyes for the redox-sensitive detection of iron and zinc. Finally, the challenges facing the use of these dyes for quant. detn. of changes in intracellular free-ion concns. are discussed.

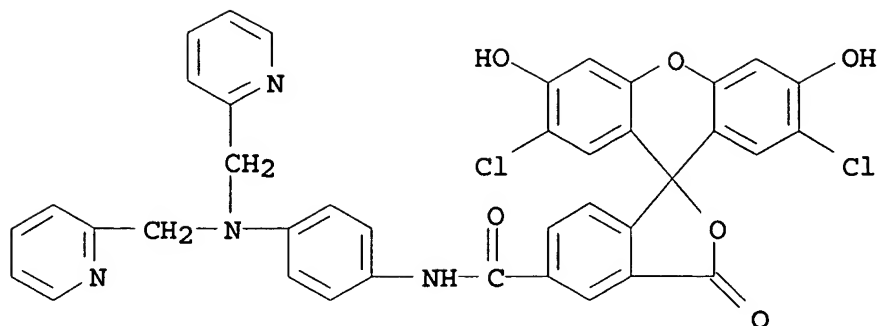
IT 288374-37-8

RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
(Uses)

(fluorescence detection of redox-sensitive iron and zinc in  
neuronal culture)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide,  
N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-  
dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 9-0 (Biochemical Methods)  
 IT 16858-02-9, TPEN 96314-98-6, Fura-2 234075-34-4, Phen Green SK  
 288374-37-8  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
 (Uses)

(fluorescence detection of redox-sensitive iron and zinc in  
 neuronal culture)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L13 ANSWER 4 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:328931 HCAPLUS  
 DOCUMENT NUMBER: 140:314092  
 TITLE: Calibration of quantitative assays or assay  
 reagents  
 PATENT ASSIGNEE(S): Evotec OAI A.-G., Germany  
 SOURCE: Ger. Gebrauchsmusterschrift, 9 pp.  
 CODEN: GGXXFR  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
DE 20216998	U1	20040422	DE 2002-20216998	200211 05
DE 10352123	A1	20040819	DE 2003-10352123	200311 04
PRIORITY APPLN. INFO.:			DE 2002-20216998	U1

05/05/2006

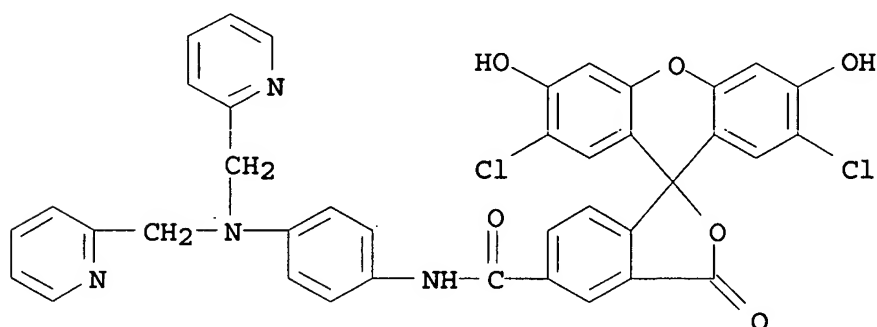
200211  
05

AB For the calibration of a quant. assay or assay reagent the wells of a base plate contain aq. calibration solns., such as UV-, visible-, IR-active, luminescent, or fluorescent dyes. The calibration compd. can be compd. which becomes detectable after complexation, intercalation, or reaction. The fluorescent dye can be a xanthene, rhodamine, oxazine, or cyanine. The dye can be PicoGreen, OliGreen, RiboGreen, TOTO, JOJO and ethidium bromide, calcein, calcium green, Fluo-3, Newport Green, or APTRA-BTC. Additives, such as fungicides, detergents, photo-stabilizers, or antibacterial agents, can be added to the calibration solns. The calibration solns. are covered by a polymeric foil in an air-tight fashion. The base plate consists of a polymer, such as polypropylene or polystyrene.

IT 288374-37-8, Newport Green  
RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(calibration of quant. assays or assay reagents)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM G01N037-00  
ICS G01N021-17; G01N021-64; G01N033-53; B01L003-00

CC 80-7 (Organic Analytical Chemistry)  
Section cross-reference(s): 9, 41

IT 1239-45-8, Ethidium bromide 1461-15-0, Calcein 123632-39-3,  
Fluo-3 138067-55-7, Calcium green 143413-84-7 177571-06-1,  
PicoGreen 216393-45-2, Glycine, N-[3-(2-benzothiazolyl)-6-  
(carboxymethoxy)-2-oxo-2H-1-benzopyran-7-yl]-N-(carboxymethyl)-,  
tripotassium salt 220751-06-4, RiboGreen 268220-33-3, OliGreen  
288374-37-8, Newport Green 305801-87-0  
RL: ARU (Analytical role, unclassified); ANST (Analytical study)

05/05/2006

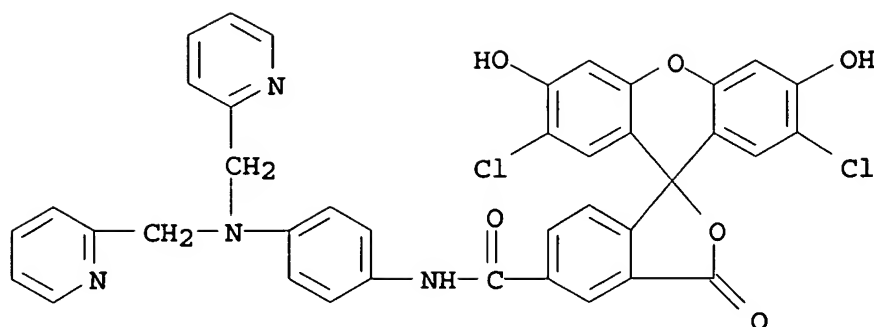
(calibration of quant. assays or assay reagents)

L13 ANSWER 5 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:588707 HCAPLUS  
DOCUMENT NUMBER: 139:269768  
TITLE: Cross-Reactive Metal Ion Sensor Array in a Micro  
Titer Plate Format  
AUTHOR(S): Mayr, Torsten; Igel, Christian; Liebsch, Gregor;  
Klimant, Ingo; Wolfbeis, Otto S.  
CORPORATE SOURCE: Institute of Analytical Chemistry Chemo- and  
Biosensors, University of Regensburg,  
Regensburg, D-93040, Germany  
SOURCE: Analytical Chemistry (2003), 75(17), 4389-4396  
CODEN: ANCHAM; ISSN: 0003-2700  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A cross-reactive array in a micro titer plate (MTP) format is described that is based on a versatile and highly flexible scheme. It makes use of rather unspecific metal ions probes having almost identical fluorescence spectra, thus enabling (a) interrogation at identical anal. wavelengths, and (b) imaging of the probes contained in the wells of the MTP using a CCD camera and an array of blue-light-emitting diodes as a light source. The unselective response of the indicators in the presence of mixts. of five divalent cations generates a characteristic pattern that was analyzed by chemometric tools. The fluorescence intensity of the indicators was transferred into a time-dependent parameter applying a scheme called dual lifetime referencing. In this method, the fluorescence decay profile of the indicator is referenced against the phosphorescence of an inert ref. dye added to the system. The intrinsically referenced measurements also were performed using blue LEDs as light sources and a CCD camera without intensifiers as the detector. The best performance was obsd. if each well was excited by a single LED. The assembly allows the detection of dye concns. in the nanomoles-per-liter range without amplification and the acquisition of 96 wells simultaneously. The pictures obtained form the basis for evaluation by pattern recognition algorithms. Support vector machines are capable of predicting the presence of significant concns. of metal ions with high accuracy.

IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
(Uses)  
(metal ions detn. in mixts. by fluorescence of indicators in cross-reactive metal ion sensor array in micro titer plate format)

RN 288374-37-8 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9']-[9H]xanthene]-5-carboxamide,  
N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-  
dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 79-2 (Inorganic Analytical Chemistry)  
 IT 72088-94-9, Carboxyfluorescein 171854-06-1, BTC-5N 234075-41-3,  
 Phen Green FL 288374-37-8, Newport Green 373640-17-6,  
 Fluo-5N 411209-53-5, FluoZin-1  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
 (Uses)

(metal ions detn. in mixts. by fluorescence of indicators in  
 cross-reactive metal ion sensor array in micro titer plate  
 format)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L13 ANSWER 6 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:67040 HCAPLUS

DOCUMENT NUMBER: 138:280514

TITLE: Highly sensitive spectrophotometric  
 determination of cetylpyridinium salt using a  
 synergistic extraction effect in the presence of  
 eosin and quinine

AUTHOR(S): Sakai, Tadao; Kitamura, Tomohide

CORPORATE SOURCE: Department of Applied Chemistry, Aichi Institute  
 of Technology, Yakusa-cho, Toyota-shi, Aichi,  
 470-0392, Japan

SOURCE: Bunseki Kagaku (2003), 52(1), 21-26

CODEN: BNSKAK; ISSN: 0525-1931

PUBLISHER: Nippon Bunseki Kagakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB A diprotic acid dye eosin and a tertiary amine quinine form a red  
 1:2 assoc. in neutral media. When trace amts. of cetylpyridinium  
 salt are added to the media, in which the red 1:2 assoc. coexists,  
 one quinine is substituted for cetylpyridinium salt and a  
 eosin-quinine-cetylpyridinium assoc. (1:1:1) is newly formed.  
 Therefore, the extractability of cetylpyridinium ion is enhanced.

As a result, a highly sensitive spectrophotometry can be developed for the detn. of trace amts. of cetylpyridinium salt. The linearity of the calibration graph is good over the range of  $2.5 \times 10^{-7}$  -  $1.5 \times 10^{-6}$  mol dm<sup>3</sup> (= M) with an relative std. deviation of 0.37%. The proposed method can be applied to the trace anal. of cetylpyridinium salt and quaternary ammonium salts.

IT 503303-10-4

RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)

(highly sensitive spectrophotometric detn. of cetylpyridinium salt using a synergistic extn. effect in the presence of eosin and quinine)

RN 503303-10-4 HCAPLUS

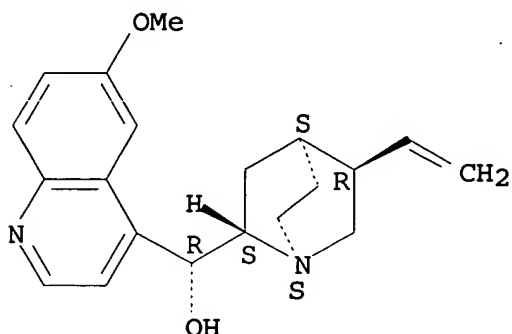
CN Cinchonan-9-ol, 6'-methoxy-, (8 $\alpha$ ,9R)-, compd. with 1-hexadecylpyridinium salt with 2',4',5',7'-tetrabromo-3',6'-dihydroxyspiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 130-95-0

CMF C20 H24 N2 O2

Absolute stereochemistry.



CM 2

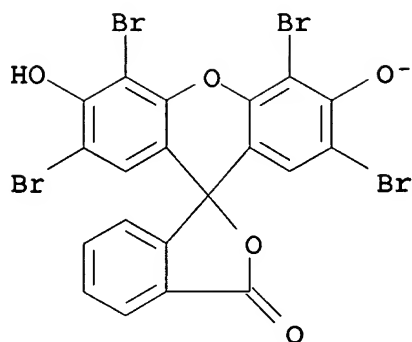
CRN 503303-09-1

CMF C21 H38 N . C20 H7 Br4 O5

CM 3

CRN 52873-39-9

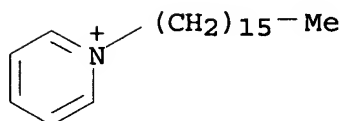
CMF C20 H7 Br4 O5



CM 4

CRN 7773-52-6

CMF C21 H38 N



CC 80-6 (Organic Analytical Chemistry)

IT 503303-10-4

RL: FMU (Formation, unclassified); PRP (Properties); FORM  
(Formation, nonpreparative)

(highly sensitive spectrophotometric detn. of cetylpyridinium  
salt using a synergistic extn. effect in the presence of eosin  
and quinine)

L13 ANSWER 7 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:927167 HCAPLUS

DOCUMENT NUMBER: 138:1932

TITLE: Method and system using metal ions for optically  
performing an assay to determine a medical  
condition

INVENTOR(S): Bar-Or, Raphael; Bar-Or, David; Curtis, C.  
Gerald

PATENT ASSIGNEE(S): Ischemia Technologies, Inc., USA

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

05/05/2006

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WO 2002096266      A2      20021205      WO 2002-US16860
                                                    200205
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WO 2002096266      A3      20030515
  W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
      CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
      GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
      LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
      NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
      TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM,
      AZ, BY, KG, KZ, MD, RU, TJ, TM
  RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
      CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,
      SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
      SN, TD, TG
US 2005021235      A1      20050127      US 2004-477384
                                                    200408
                                                    26
PRIORITY APPLN. INFO.:      US 2001-294955P      P
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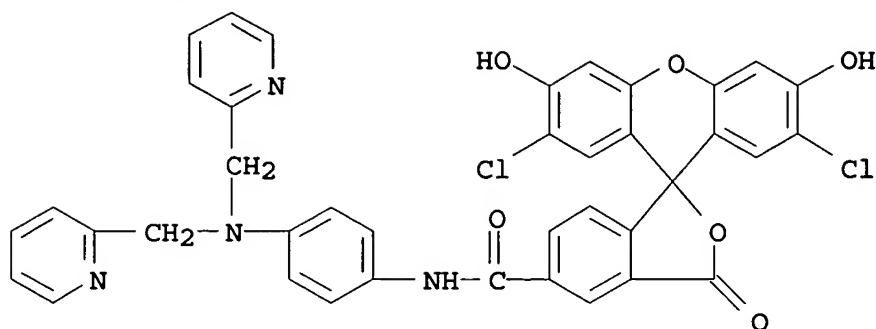
AB A method and system are disclosed for detecting a medical condition wherein a blood or plasma sample is combined with a metal such as cobalt and optically analyzed for an optical distinction that identifies the medical condition. The invention is useful for diagnosing medical conditions such as ischemia. Moreover, the diagnoses of patient samples according to the invention may be enhanced by developing a math. model based on signal processing techniques such as principal component anal. on the spectral data obtained in patient studies. An assay system was used to analyzed blood plasma samples from individuals with and without clin. ischemia. The samples were reacted with  $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$  for 2-5 min before spectra from 200-350 nm were obtained with and without cobalt. Differences in the resulting output spectrums were analyzed by performing the integration of the graph of the differential spectra.

IT 288374-37-8, Newport green

RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (fluorescent dye; method and system using metal ions for optically performing assays to det. medical conditions)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM A61B  
 CC 9-1 (Biochemical Methods)  
 IT 91-64-5, 2H-1-Benzopyran-2-one 13558-31-1 288374-37-8,  
 Newport green  
 RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST  
 (Analytical study); BIOL (Biological study); USES (Uses)  
 (fluorescent dye; method and system using metal ions for  
 optically performing assays to det. medical conditions)

L13 ANSWER 8 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:922023 HCAPLUS  
 DOCUMENT NUMBER: 137:365962  
 TITLE: Method for identification and purification of  
 human pancreatic beta cells using a specific  
 fluorescent zinc probe  
 PATENT ASSIGNEE(S): Centre Hospitalier Regional et Universitaire de  
 Lille Chru, Fr.  
 SOURCE: Fr. Demande, 42 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2822954	A1	20021004	FR 2001-4368	200103 30
PRIORITY APPLN. INFO.:				200103 30

05/05/2006

AB The invention concerns a method for the purifn. and identification of insulin secretory pancreatic  $\beta$ -cells by means of a novel probe specific for  $Zn^{2+}$  cations. The said method includes the placing of a pancreatic cell prepn. in contact with a fluorescent probe which emits a strong intensity of unique light when  $Zn^{2+}$  cations are liberated in the cells.

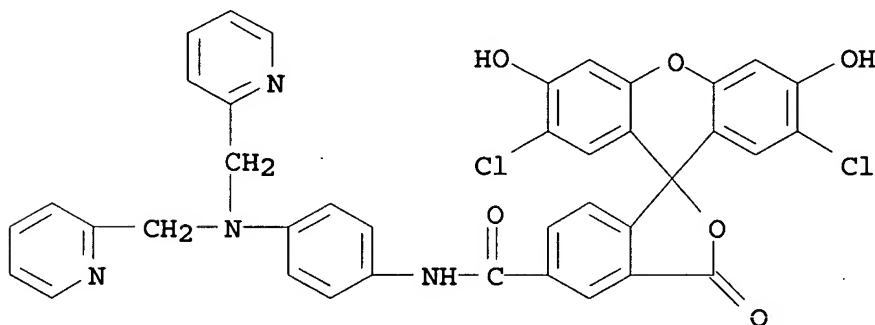
IT 288374-37-8D, Newport Green, diacetate derivs.

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(method for identification and purifn. of human pancreatic beta cells using a specific fluorescent zinc probe)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)aminophenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM G01N033-48

ICA C12N005-08

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 13

IT 288374-37-8D, Newport Green, diacetate derivs.

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(method for identification and purifn. of human pancreatic beta cells using a specific fluorescent zinc probe)

L13 ANSWER 9 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:694237 HCAPLUS

DOCUMENT NUMBER: 137:237307

TITLE: Simultaneous determination of trace Ni(II) and Zn(II) in water by using fluorescence-based flow injection analysis

AUTHOR(S): Zhang, Jingdong; Niessner, Reinhard

CORPORATE SOURCE: School of Resources and Environment Science,  
Wuhan University, Wuhan, 430072, Peop. Rep.  
China

SOURCE: Fenxi Shiyanshi (2002), 21(4), 1-4  
CODEN: FENSE4; ISSN: 1000-0720

PUBLISHER: Fenxi Shiyanshi Bianjibu

DOCUMENT TYPE: Journal

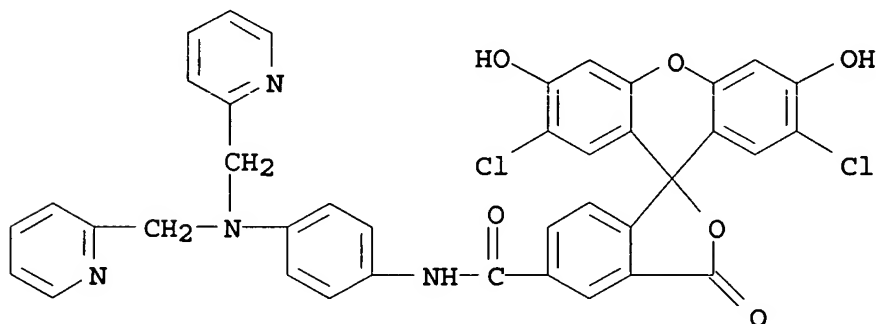
LANGUAGE: Chinese

AB This paper presents a method for detn. of trace Ni(II) and Zn(II) in  
H<sub>2</sub>O by fluorescence of Newport Green coupled with FIA. A linear  
calibration curve was obtained in the range of 10 µg/L .apprx.  
200 µg/L for Ni(II) and Zn(II), with detection limit of 8.1, 8.4  
µg/L, resp. This method can also be used to det. trace Ni(II)  
and Zn(II) simultaneously.

IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
(Uses)  
(in simultaneous detn. of trace Ni(II) and Zn(II) in water by  
using fluorescence-based flow injection anal.)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide,  
N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-  
dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



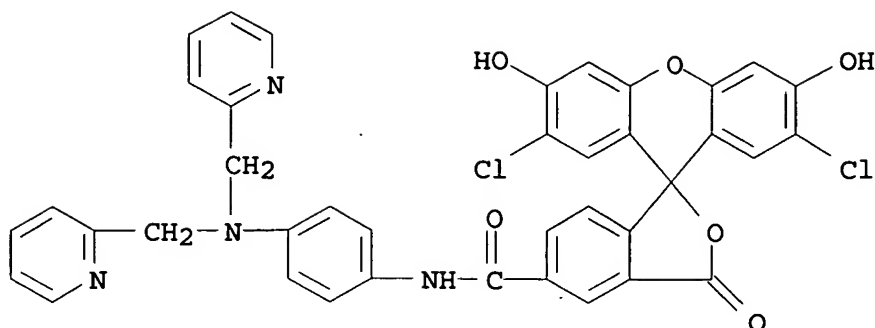
● 2 K

CC 61-3 (Water)  
Section cross-reference(s): 79

IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
(Uses)  
(in simultaneous detn. of trace Ni(II) and Zn(II) in water by  
using fluorescence-based flow injection anal.)

L13 ANSWER 10 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2002:671305 HCAPLUS

DOCUMENT NUMBER: 138:316921  
TITLE: Use of steady-state fluorescence anisotropy with  
pebble nanosensors for chemical analysis  
AUTHOR(S): Horvath, Thomas; Monson, Eric E.; Sumner, James;  
Xu, Hao; Kopelman, Raoul  
CORPORATE SOURCE: Dep. Chem., Univ. of Michigan, Ann Arbor, MI,  
48109-1055, USA  
SOURCE: Proceedings of SPIE-The International Society  
for Optical Engineering (2002), 4626(Biomedical  
Nanotechnology Architectures and Applications),  
486-492  
CODEN: PSISDG; ISSN: 0277-786X  
PUBLISHER: SPIE-The International Society for Optical  
Engineering  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The authors show that steady-state fluorescence anisotropy within  
PEBBLES can be used for the optochem. sensing of analytes such as  
Zn<sup>2+</sup>, O<sub>2</sub>, and Ca<sup>2+</sup>. Steady-state fluorescence anisotropy is a non-  
time resolved method that measures a combination of rotational and  
fluorescence lifetimes. This eliminates the need for ref. dyes and  
ratiometric techniques to obtain quant. results, even when using  
intensity-based sensor dyes. An advantage to working with PEBBLE  
nanosensors is that the encapsulated dye is localized in a const.  
rotational environment. This is in contrast to the use of free  
dyes, which can be affected by interferents such as protein binding.  
IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
(Uses)  
(steady-state fluorescence anisotropy with PEBBLE nanosensors for  
chem. anal.)  
RN 288374-37-8 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide,  
N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-  
dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 9-1 (Biochemical Methods)  
IT 7440-18-8, Ruthenium, uses 138067-55-7, Calcium green  
288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
(Uses)  
(steady-state fluorescence anisotropy with PEBBLE nanosensors for  
chem. anal.)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L13 ANSWER 11 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2002:646585 HCAPLUS  
DOCUMENT NUMBER: 138:34300  
TITLE: A reevaluation of neuronal zinc measurements:  
Artifacts associated with high intracellular dye  
concentration  
AUTHOR(S): Dineley, Kirk E.; Malaiyandi, Latha M.;  
Reynolds, Ian J.  
CORPORATE SOURCE: Department of Pharmacology, University of  
Pittsburgh, Pittsburgh, PA, USA  
SOURCE: Molecular Pharmacology (2002), 62(3), 618-627  
CODEN: MOPMA3; ISSN: 0026-895X  
PUBLISHER: American Society for Pharmacology and  
Experimental Therapeutics  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The emergence of zinc as a potent neurotoxin has prompted the  
development of techniques suitable for the measurement of  
intracellular free zinc ( $[Zn^{2+}]_i$ ) in cultured cells. Accordingly, a  
new family of  $Zn^{2+}$ -sensitive fluorophores has become available.  
Using ionophore-induced elevations of  $[Zn^{2+}]_i$  in cultured neurons,  
we measured  $[Zn^{2+}]_i$ -induced changes in the novel dyes FuraZin-1 and  
FluoZin-2 and compared them with the established  $[Zn^{2+}]_i$ -sensitive

fluorophores mag-fura-2 and Newport Green. All of these dyes effectively detected  $[Zn^{2+}]_i$ , and FuraZin-1, FluoZin-2, and Newport Green showed selectivity for  $[Zn^{2+}]_i$  over  $[Ca^{2+}]_i$  and  $[Mg^{2+}]_i$ . However, the dyes showed little difference in their apparent sensitivity to  $[Zn^{2+}]_i$ , even though their in vitro affinities for  $Zn^{2+}$  varied from 20 nM to 3  $\mu$ M. We show herein that this is a consequence of the relatively high concns. of intracellular dye used in expts. of this nature. Thus, for the measurement of  $[Zn^{2+}]_i$ , the sensitivity of the reporting system is dominated by the intracellular dye concn., whereas dye affinity is unimportant. We extend these findings to show that calibration of dye signal to ion concn. is critically dependent on precise measurement of intracellular dye concn.

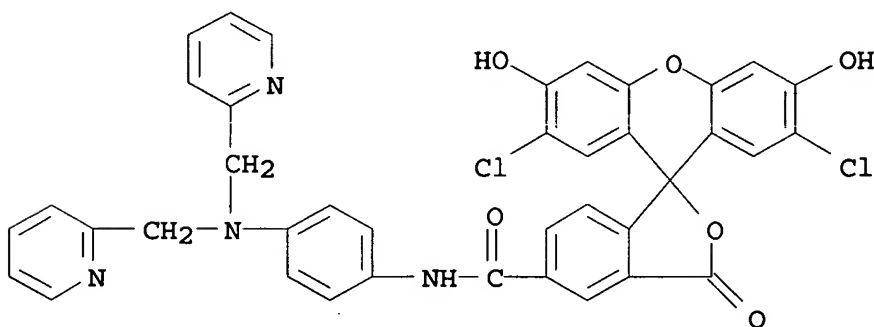
IT 288374-37-8, Newport Green

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(artifacts assocd. with high intracellular dye concn. for evaluation of neuronal zinc)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 4-1 (Toxicology)

Section cross-reference(s): 9

IT 130100-20-8, Mag-fura-2 288374-37-8, Newport Green

478686-49-6, FuraZin 1

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(artifacts assocd. with high intracellular dye concn. for evaluation of neuronal zinc)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 12 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:634928 HCAPLUS

DOCUMENT NUMBER: 139:3133

TITLE: Fluorescent zinc indicators for neurobiology

AUTHOR(S): Thompson, R. B.; Peterson, Dwight; Mahoney, William; Cramer, Michele; Maliwal, Badri P.; Suh, Sang Won; Frederickson, Chris; Fierke, Carol; Herman, Petr

CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Center for Fluorescence Spectroscopy, University of Maryland School of Medicine, Baltimore, MD, 21201, USA

SOURCE: Journal of Neuroscience Methods (2002), 118(1), 63-75

CODEN: JNMEDT; ISSN: 0165-0270

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mounting evidence indicates that zinc has multiple roles in cell biol., viz. as a part of metalloenzyme catalytic sites, as a structural component of gene regulatory proteins, and (like calcium) as a free signal ion, particularly in the cortex of the brain. While most Zn(II) in the brain is tightly bound, such that free Zn(II) levels extracellularly and intracellularly are likely to be picomolar, a subset of glutamatergic neurons possess weakly bound zinc in presynaptic boutons which is released at micromolar levels in response to a variety of stimuli. Key to further progress in understanding the multiple roles of zinc will be the availability of fluorescent indicator systems that will permit quant. detn. and imaging of zinc fluxes and levels over a broad concn. range both intracellularly and extracellularly using fluorescence microscopy. Towards that end, we have compared a variety of fluorescent indicators for their sensitivity to Zn(II) and Cu(II), selectivity for Zn(II) in the presence of potential interferents such as Ca(II) or Mg(II), and potential for quant. imaging. The com. available probes Fura-2, Mag-Fura-5, Newport Green DCF, and FuraZin-1 were compared with the carbonic anhydrase-based indicator systems for selectivity and sensitivity. In addn., intracellular levels of Zn following excitotoxic insult were detd. by single pixel fluorescence lifetime microscopy of Newport Green DCF, and extracellular levels of free zinc following stimulus of rat hippocampal slices were detd. ratiometrically with a carbonic anhydrase-based indicator system. These results suggest that zinc ion at high nM to  $\mu$ M levels can be accurately quantitated by FuraZin-1 ratiometrically or by Newport Green DCF by fluorescence lifetime; and at levels down to pM by intensity ratio, lifetime, or polarization using carbonic anhydrase-based systems.

IT 288374-37-8, Newport Green DCF dipotassium salt

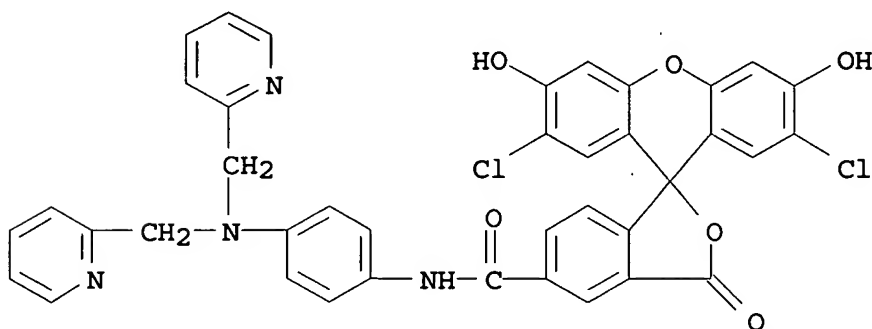
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(sensitivity, selectivity and quantitation of fluorescent zinc

indicators for neurobiol. by fluorometry and fluorescence microscopy)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 9-15 (Biochemical Methods)

IT 91366-65-3, ABD-F 96314-98-6, Fura-2 288374-37-8,

Newport Green DCF dipotassium salt 478686-49-6, FuraZin-1

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(sensitivity, selectivity and quantitation of fluorescent zinc indicators for neurobiol. by fluorometry and fluorescence microscopy)

REFERENCE COUNT: 98 THERE ARE 98 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 13 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:150431 HCAPLUS

DOCUMENT NUMBER: 136:196413

TITLE: A fluorescent PEBBLE nanosensor for intracellular free zinc

AUTHOR(S): Sumner, James P.; Aylott, Jonathan W.; Monson, Eric; Kopelman, Raoul

CORPORATE SOURCE: Department of Chemistry, University of Michigan, Ann Arbor, MI, 48109-1055, USA

SOURCE: Analyst (Cambridge, United Kingdom) (2002), 127(1), 11-16

CODEN: ANALAO; ISSN: 0003-2654

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The development and characterization of a fluorescent optical PEBBLE (Probe Encapsulated By Biol. Localized Embedding) nanosensor for the detection of zinc is detailed. A ratiometric sensor has been fabricated that incorporates two fluorescent dyes: one is sensitive to zinc and the other acts as a ref. The sensing components are entrapped within a polymer matrix by a microemulsion polymn. process that produces spherical sensors that are in the size region of 20 to 200 nm. Cellular measurements are made possible by the small sensor size and the biocompatibility of the matrix. The effects of reversibility, photobleaching and leaching have been examd., as well as the selectivity towards zinc over other cellular ions such as Na<sup>+</sup>, Ca<sup>2+</sup>, K<sup>+</sup>, and Mg<sup>2+</sup>. The dynamic range of these sensors was found to be 4 to 50  $\mu$ M Zn<sup>2+</sup> with a linear range from 15 to 40  $\mu$ M. The response time for the PEBBLE is less than 4 s and the sensor is reversible. In addn., the nanosensors are photostable and leaching from the matrix, detd. using a novel method, is minimal. These sensors are capable of real-time inter- and intra-cellular imaging and are insensitive to interference from proteins.

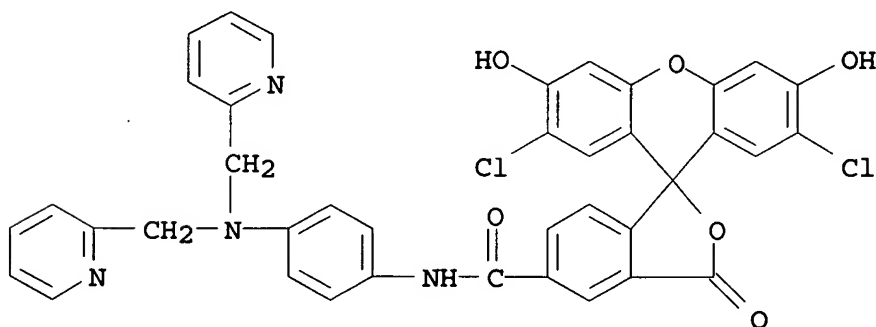
IT 288374-37-8, Newport green

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(fluorescent PEBBLE nanosensor for intracellular free zinc)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 9-5 (Biochemical Methods)

IT 288374-37-8, Newport green

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(fluorescent PEBBLE nanosensor for intracellular free zinc)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE

## IN THE RE FORMAT

L13 ANSWER 14 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:51504 HCAPLUS  
 DOCUMENT NUMBER: 136:112623  
 TITLE: Zinc finger motif sequences from herpes simplex  
 virus protein IE63 and uses thereof in drug  
 screening for treating herpesvirus infection  
 INVENTOR(S): Clements, John Barklie; MacLean, Alasdair  
 Roderick  
 PATENT ASSIGNEE(S): The University Court of the University of  
 Glasgow, UK  
 SOURCE: PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004492	A2	20020117	WO 2001-GB3114	200107 11
WO 2002004492	A3	20020510		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1299725	A2	20030409	EP 2001-949666	200107 11
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
US 2003186283	A1	20031002	US 2003-332795	200302 11
US 6946253	B2	20050920		
PRIORITY APPLN. INFO.:			GB 2000-16890	A 200007 11
			WO 2001-GB3114	W 200107 11

AB The present invention is based on that the spacing and metal-co-ordinating residues in the IE63 zinc finger of herpes simplex virus type I are conserved in all related homologues within the  $\alpha$ -herpesvirus subfamily. Similar conservation of spacing of zinc finger motifs but with different arrangements of the conserved motif residues was also discovered within the  $\beta$ -herpesvirus and  $\gamma$ -herpesvirus family. The present invention relates to a method for detecting an agent for use in the treatment of herpes virus infection and use of known agents, such as 2,2'-dithiobisbenzamide (DIBA) and azodicarbonamide (ADA), and unknown agents, which selectively eject zinc bound to a zinc finger protein, for the manuf. of a medicament for the treatment of herpesvirus infections.

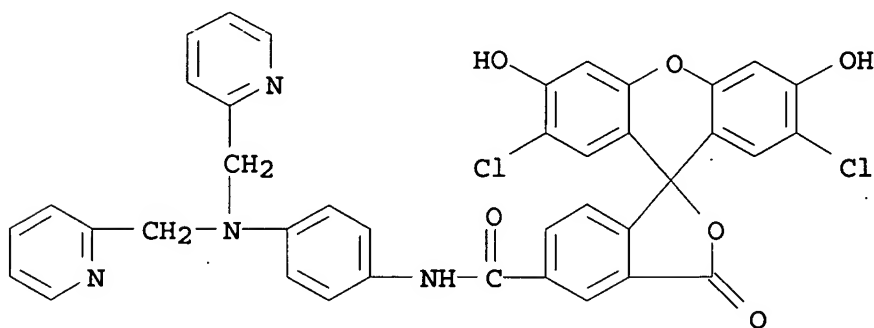
IT 288374-37-8, Newport Green

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(for screening agents treating herpes virus infection; zinc finger motif sequences from herpes simplex virus protein IE63 and uses thereof in drug screening for treating herpesvirus infection)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9']-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM C07K014-005

CC 1-5 (Pharmacology)

Section cross-reference(s): 3, 6, 10

IT 109628-27-5 288374-37-8, Newport Green

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(for screening agents treating herpes virus infection; zinc finger motif sequences from herpes simplex virus protein IE63 and

uses thereof in drug screening for treating herpesvirus infection)

L13 ANSWER 15 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:868787 HCAPLUS  
 DOCUMENT NUMBER: 136:1818  
 TITLE: Method and apparatus for portable product authentication  
 INVENTOR(S): Behringer, Friedrich; Aubrecht, Sarka; Selinfreund, Richard H.; Vig, Rakesh  
 PATENT ASSIGNEE(S): Verification Technologies, Inc., USA  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090729	A2	20011129	WO 2001-US10911	20010404
WO 2001090729	A3	20020404		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2406167	AA	20011129	CA 2001-2406167	20010404
JP 2003534546	T2	20031118	JP 2001-586445	20010404
PRIORITY APPLN. INFO.:				20000519
US 2000-575411				A
WO 2001-US10911				W
				20010404

AB Holders for holding microplates or films having  $\geq 1$  light-sensitive compd. disposed thereon for use in verifying a

sample liq. product are described which comprise a first section and a second section which can be secured to the first section, the first and second sections constructed and arranged to envelope the microplate or film when the first section is secured to the second section and when the microplate or film, having the sample liq. product disposed thereon, is placed therein. The substrate provides immobilization of the light-sensitive compds. and provides a three-dimensional environment similar to free soln. for reactions with the product sample to occur. A sample product can be placed on the microplate and the light-sensitive compd. thereon is free to react with key ingredients in the sample product; after reaction, the microplate can be irradiated with a light source and light emission or absorption due to the interaction of the light-sensitive compd. and the key ingredient is compared to a fingerprint. Kits of parts for use in verifying a sample liq. product are also described which comprise a microplate or film having  $\geq 1$  light-sensitive compd. disposed thereon for reaction with the sample product; a holder constructed and arranged to hold the microplate or film therein; and a package for packaging the microplate or film and the holder. Application to the anal. of foods and beverages, esp. alc. beverages, is indicated.

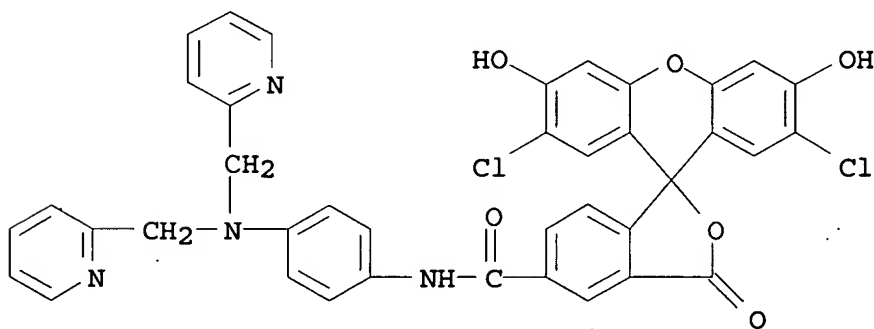
IT 288374-37-8, Newport Green

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(portable product authentication kits using fluorescent indicators)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthene] -5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM G01N021-76

ICS G01N033-52

CC 4-2 (Toxicology)

Section cross-reference(s): 17, 73, 79, 80  
 IT 18861-78-4, Fluorescein-6-isothiocyanate 47623-98-3,  
 Bis-(1,3-diethylthiobarbituric acid)trimethine oxonol  
 288374-37-8, Newport Green  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES  
 (Uses)  
 (portable product authentication kits using fluorescent  
 indicators)

L13 ANSWER 16 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:581981 HCAPLUS  
 DOCUMENT NUMBER: 135:167971  
 TITLE: Environmental detection reagent with  
 fluorophores  
 INVENTOR(S): Thomas, Nicholas; Cooper, Michael E.; Adie,  
 Elaine  
 PATENT ASSIGNEE(S): Amersham Pharmacia Biotech UK Limited, UK  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001057141	A1	20010809	WO 2001-GB402	20010201
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2399419	AA	20010809	CA 2001-2399419	20010201
EP 1252236	A1	20021030	EP 2001-902525	20010201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003522247	T2	20030722	JP 2001-557964	20010201
AU 779602	B2	20050203	AU 2001-30380	

200102  
01

US 2003211454 A1 20031113 US 2002-182994

200210  
16

PRIORITY APPLN. INFO.: GB 2000-2261 A

200002  
02

GB 2000-31168 A

200012  
21

WO 2001-GB402 W

200102  
01

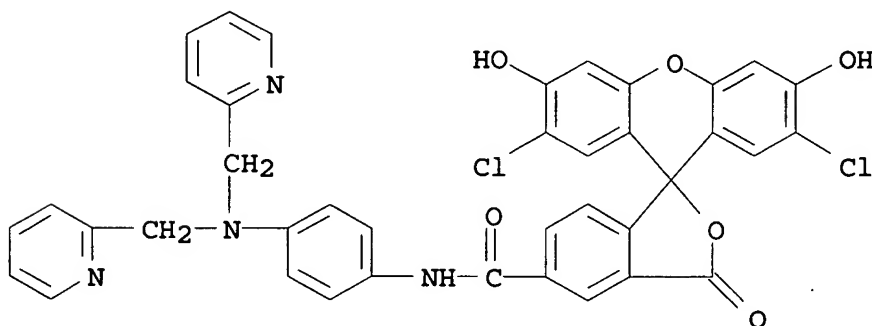
AB An environmentally sensitive ratiometric reporter mol. is a compd. of formula D1-L-D2 wherein D1 and D2 are detectable mols. (such as fluorophores) and D1 is a ref. mol.; D2 is an environmentally sensitive mol.; and L is a linker group characterized in that there is no energy transfer between D1 and D2.

IT 288374-37-8, Newport Green

RL: TEM (Technical or engineered material use); USES (Uses) (environmental detection reagent with fluorophores)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthene] -5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM C09B023-00

ICS C09B023-08; C09B057-00; G01N033-533

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

IT 65-85-0, Benzoic acid, uses 93-97-0, Benzoic anhydride  
 1758-68-5, 1,2 Diaminoanthraquinone 73630-23-6, Quin2  
 96314-98-6, Fura 2 109628-27-5 119971-42-5, 6-Methoxy-N-(3-  
 sulfopropyl)quinolinium 123632-39-3, Fluo-3 138067-54-6, Calcium  
 Crimson 170516-41-3, Magnesium Green 288374-37-8,  
 Newport Green 353742-26-4, Phen Green PL  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (environmental detection reagent with fluorophores)  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L13 ANSWER 17 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:320220 HCAPLUS  
 DOCUMENT NUMBER: 134:321979  
 TITLE: Method and apparatus for providing  
 light-emissive compounds in portable product  
 authentication  
 INVENTOR(S): Behringer, Fredrich; Aubrecht, Sarka;  
 Selinfreund, Richard H.; Vig, Rakesh  
 PATENT ASSIGNEE(S): Veritec, USA  
 SOURCE: PCT Int. Appl., 38 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001031341	A1	20010503	WO 2000-US40734	200008 24
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6512580	B1	20030128	US 1999-428704	199910 27
CA 2389066	AA	20010503	CA 2000-2389066	200008 24
EP 1183537	A1	20020306	EP 2000-971042	200008

24

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT,  
IE, SI, LT, LV, FI, RO

EP 1251351 A2 20021023 EP 2002-13428

200008

24

EP 1251351 A3 20030102

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT,  
IE, FI, CY

JP 2003513245 T2 20030408 JP 2001-533427

200008

24

PRIORITY APPLN. INFO.:

US 1999-428704 A

199910

27

EP 2000-971042 A3

200008

24

WO 2000-US40734 W

200008

24

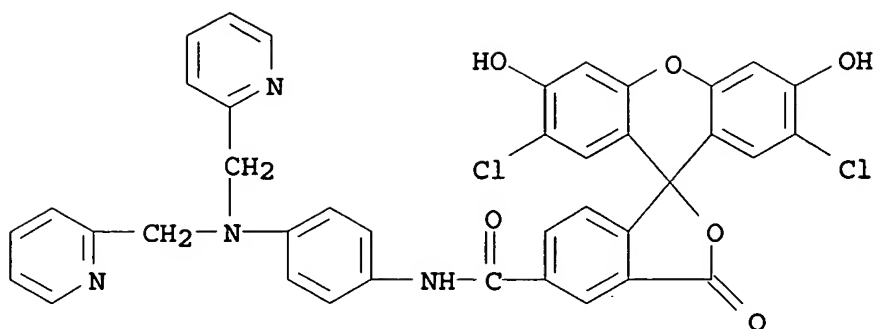
AB A method and app. for on-site verification of product authentication and quality includes a microplate having a substrate with a light-emissive compd. thereon. The substrate provides immobilization of the light-emissive compds. and provides a three-dimensional environment similar to free soln. for reactions with the product sample to occur. The microplate may include any material having desired light reflective properties and a surface to retain the light-emissive compds. therein. A metered amt. of light-emissive compd. is placed on the microplate by any desired metering method, such as hand-metering by skilled technicians, automatic metering using robotic equipment, or printing using for example, piezoelec. dispensing technol. In this respect, the light-emissive compd. is placed on a microplate, with the microplate. Once the light-emissive compd. is applied to the substrate, the microplate may be sent to the test site where product testing is to be performed. A sample product is placed on the microplate and the light-emissive compd. thereon is free to react with key ingredients in the sample product. Light emission from the light-emissive compd. and the key ingredient is compared to a fingerprint.

IT 288374-37-8, Newport Green

RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(method and app. for providing light-emissive compds. in portable product authentication)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide,  
N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-  
dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM G01N033-543  
CC 4-2 (Toxicology)  
Section cross-reference(s): 17  
IT 18861-78-4, Fluorescein 6-isothiocyanate 47623-98-3,  
Bis-(1,3-diethylthiobarbituric acid)trimethine oxonol  
288374-37-8, Newport Green  
RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(method and app. for providing light-emissive compds. in portable  
product authentication)  
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L13 ANSWER 18 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:296345 HCAPLUS  
DOCUMENT NUMBER: 134:350161  
TITLE: Identification and purification of functional  
human  $\beta$ -cells by a new specific  
zinc-fluorescent probe  
AUTHOR(S): Lukowiak, Bruno; Vandewalle, Brigitte; Riachy,  
Rita; Kerr-Conte, Julie; Gmyr, Valery; Belaich,  
Sandrine; Lefebvre, Jean; Pattou, Francois  
CORPORATE SOURCE: UPRS 1048/ERIT-M-INSERM, Universite de Lille,  
Lille, 59045, Fr.  
SOURCE: Journal of Histochemistry and Cytochemistry  
(2001), 49(4), 519-527  
CODEN: JHCYAS; ISSN: 0022-1554  
PUBLISHER: Histochemical Society, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Pancreatic  $\beta$ -cells contain large amts. of zinc. We took  
advantage of this to try to localize, quantify, and isolate  
insulin-producing cells from islet preps. Our study was designed

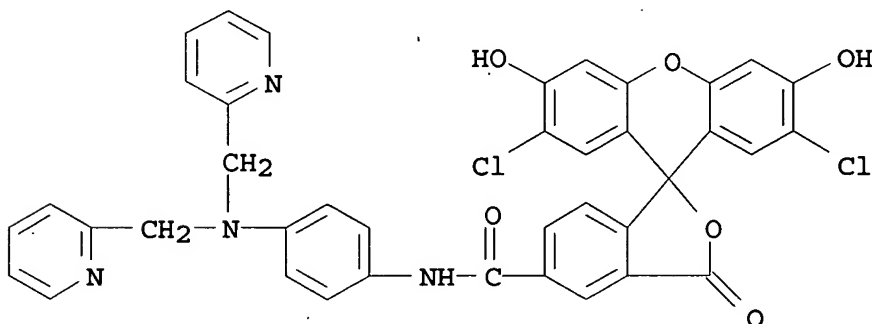
to identify a non-toxic zinc-sensitive fluorescent probe able to selectively label labile zinc in viable  $\beta$ -cells and to exhibit excitation and emission wavelengths in the visible spectrum, making this technique exploitable by most instruments. We tested Newport Green, a probe excitable at 485 nm with a dissociation constant in the micromolar range corresponding to a low affinity for zinc. The loading of the lipophilic esterified form of Newport Green was easy, rapid, specific, and non-toxic to cells. Confocal microscopy highlighted an intense fluorescence associated with secretory granules. Regression analyses showed a good relationship between zinc fluorescence and islet number ( $r=0.98$ ) and between zinc fluorescence and insulin content ( $r=0.81$ ). The determination of Zn fluorescence per DNA enabled us to assess the quality of the different islet preparations intended for islet allografting in terms of both purity and viability. Cell sorting of dissociated Newport Green-labeled cells resulted in a clear separation of  $\beta$ -cells, as judged by insulin content per DNA and immunocytochemical analysis. This zinc probe, the first able to specifically label living cells in the visible spectrum, appears very promising for  $\beta$ -cell experimentation, both clinically and for basic research.

IT 288374-37-8, Newport Green  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(human  $\beta$ -cells identification and purification by new specific zinc-fluorescent probe)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9']-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 9-5 (Biochemical Methods)  
 Section cross-reference(s): 13

IT 288374-37-8, Newport Green  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES

## (Uses)

(human  $\beta$ -cells identification and purifn. by new specific  
zinc-fluorescent probe)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L13 ANSWER 19 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:185607 HCAPLUS  
DOCUMENT NUMBER: 134:227402  
TITLE: L-selectin contrast agents for depicting changes  
in lymph nodes  
INVENTOR(S): Debus, Nils-Peter; Sydow, Sabine; Hofmann,  
Birte; Briel, Andreas; Roessling, Georg  
PATENT ASSIGNEE(S): Institut fuer Diagnostikforschung G.m.b.H. an  
der Freie Universitaet Berlin, Germany  
SOURCE: PCT Int. Appl., 29 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001017566	A2	20010315	WO 2000-EP8693	20000906
WO 2001017566	A3	20001220		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
DE 10013849	A1	20010315	DE 2000-10013849	20000315
EP 1210125	A2	20020605	EP 2000-964128	20000906
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
JP 2003508499	T2	20030304	JP 2001-521354	20000906
NO 2002001128	A	20020307	NO 2002-1128	

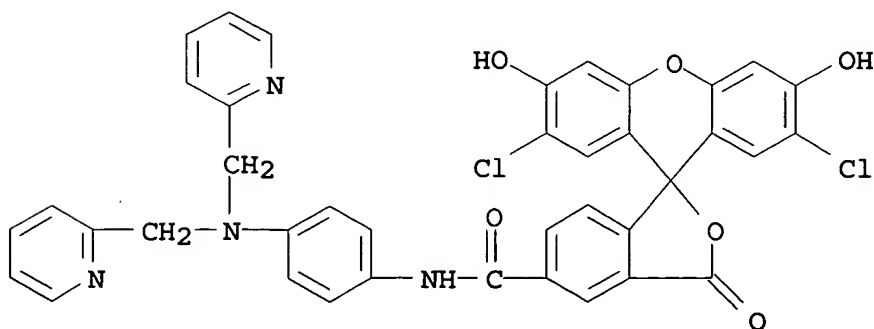
			200203 07
PRIORITY APPLN. INFO.:	DE 1999-19943710	A	199909 08
	DE 2000-10013849	A	200003 15
	WO 2000-EP8693	W	200009 06

AB The invention relates to novel contrast agents for depicting changes in lymph nodes, depicting inflammatory processes, and pathol. changes. The inventive contrast agents are bound to the specific expression of endothelial and/or leukocyte ligands. The invention also relates to a method for producing said contrast agents. Copntrast agents were prepd. that contain L-selectin-IgG-multi-His; these chimers were used as conjugates with Newport Green via nickel and 123I-labeled for X-ray imaging; in other conjugates, e.g. with Protein G and colloidal gold the contrast agent was used in silver staining, surface plasmon resonance measurements etc. Other conjugates are disclosed for usage as MRI, ultrasonic, and NIR imaging agents.

IT 288374-37-8D, Newport Green, conjugate with L-selectin-IgG-multi-His via nickel, 123I-labeled  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (L-selectin contrast agents for depicting changes in lymph nodes)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9']-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)

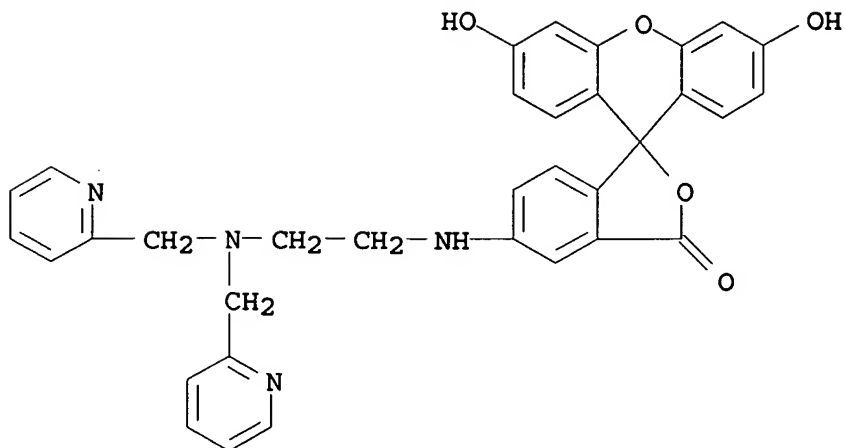


IC ICM A61K049-00  
CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 8, 9  
IT 1317-61-9D, Iron oxide (Fe<sub>3</sub>O<sub>4</sub>), coupled to dextran and  
L-selectin-IgG-multi-His, L-selectin-IgG-multi-His-Protein G  
1332-37-2D, Iron oxide, conjugate with L-selectin, biological  
studies 7440-54-2D, Gadolinium, chelates, conjugates with  
carbohydrates and dendritic polyamines, DSM-64-NTA-Gd-DTPA, coupled  
to multi-His-LL-selectin, biological studies 7440-57-5D, Gold,  
conjugate with L-selectin-IgG-multi-His and Protein G, biological  
studies 9004-54-0D, Dextran, coupled to magnetite and  
L-selectin-IgG-multi-His, L-selectin-IgG-multi-His-Protein G,  
biological studies 113231-05-3D, Lysine-N,N-diacetic acid, coupled  
to dextran-magnetite and/or L-selectin-IgG-multi-His or  
L-selectin-IgG-multi-His-Protein G 288374-37-8D, Newport  
Green, conjugate with L-selectin-IgG-multi-His via nickel,  
123I-labeled  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(L-selectin contrast agents for depicting changes in lymph nodes)

L13 ANSWER 20 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2000:828032 HCAPLUS  
DOCUMENT NUMBER: 134:128123  
TITLE: Highly Zinc-Selective Fluorescent Sensor  
Molecules Suitable for Biological Applications  
AUTHOR(S): Hirano, Tomoya; Kikuchi, Kazuya; Urano,  
Yasuteru; Higuchi, Tsunehiko; Nagano, Tetsuo  
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, The  
University of Tokyo, Tokyo, 113-0033, Japan  
SOURCE: Journal of the American Chemical Society (2000),  
122(49), 12399-12400  
CODEN: JACSAT; ISSN: 0002-7863  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB We have developed new fluorescent Zn<sup>2+</sup> sensor mols., ZnAFs, which  
possess the characteristics of improved selectivity and faster  
complex formation. Since these sensor mols. only fluoresce after  
the coordination with Zn<sup>2+</sup>, they should be useful for studies on the  
biol. functions of Zn<sup>2+</sup>.  
IT 321859-10-3P  
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST  
(Analytical study); PREP (Preparation); USES (Uses)  
(ZnAF-1; highly zinc-selective fluorescent sensor mols. suitable  
for biol. applications)  
RN 321859-10-3 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
5-[[2-[bis(2-pyridinylmethyl)amino]ethyl]amino]-3',6'-dihydroxy-,  
tetrakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

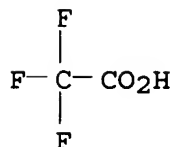
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CRN 321859-09-0  
CMF C34 H28 N4 O5



CM 2

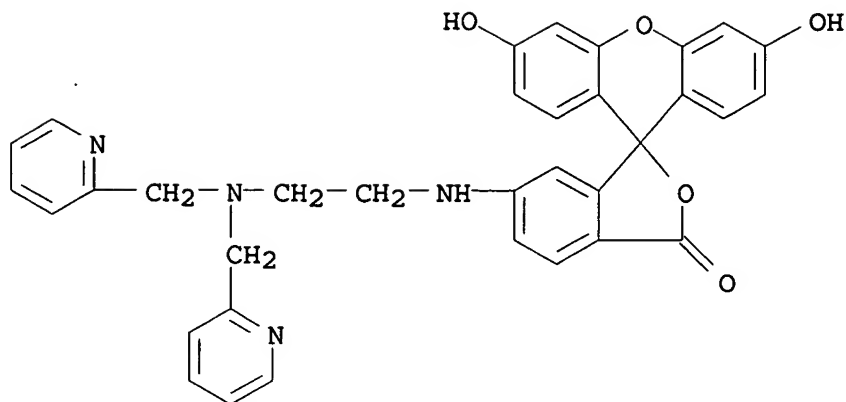
CRN 76-05-1  
CMF C2 H F3 O2



IT 321859-12-5P  
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)  
(ZnAF-2; highly zinc-selective fluorescent sensor mols. suitable for biol. applications)  
RN 321859-12-5 HCAPLUS  
CN Spiro[isobenzofuran-1(3H), 9']-[9H]xanthen-3-one, 6-[[2-[bis(2-pyridinylmethyl)amino]ethyl]amino]-3',6'-dihydroxy-, tetrakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

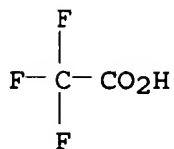
CRN 321859-11-4  
CMF C34 H28 N4 O5



CM 2

CRN 76-05-1

CMF C2 H F3 O2



CC 9-14 (Biochemical Methods)

IT 321859-10-3P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)  
(ZnAF-1; highly zinc-selective fluorescent sensor mols. suitable for biol. applications)

IT 321859-12-5P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)  
(ZnAF-2; highly zinc-selective fluorescent sensor mols. suitable for biol. applications)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 21 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:615566 HCAPLUS

DOCUMENT NUMBER: 133:271219

TITLE: Detection of heavy metals in water by fluorescence spectroscopy: On the way to a suitable sensor system

AUTHOR(S): Prestel, H.; Gahr, A.; Niessner, R.

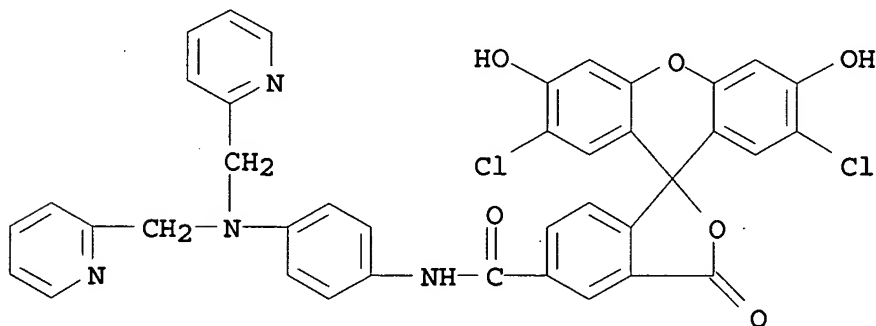
CORPORATE SOURCE: Institute of Hydrochemistry, Technical  
University of Munich, Munich, 81377, Germany  
SOURCE: Fresenius' Journal of Analytical Chemistry  
(2000), 368(2-3), 182-191  
CODEN: FJACES; ISSN: 0937-0633  
PUBLISHER: Springer-Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB To develop a fiber optical heavy metal ion detection system, the applicability of selected complexing agents with fluorescent properties was studied. Beginning with the application of known chelators, like BTC-5N, Newport Green, neocuproine, and chromotropic acid, a sensor configuration was found, which allows the detection of Cd<sup>2+</sup>, Ni<sup>2+</sup>, and Cu<sup>2+</sup> well below the chem. parameter threshold values of the new Water Quality Directive 98/83/EU. The sensor itself uses a membrane sepn. of the chelator flow from the sample vol. The diffusion across the membrane limits the response time to ≈15-20 min. Applications are seen in monitoring networks.

IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(development of sensor system for fluorimetric detn. of heavy metals in water using)

RN 288374-37-8 HCAPLUS.

CN Spiro[isobenzofuran-1(3H), 9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 61-3 (Water)

Section cross-reference(s): 79

IT 148-25-4, Chromotropic acid 484-11-7, Neocuproine 150547-61-8  
167781-43-3 171854-06-1, BTC-5N 288374-37-8, Newport  
Green

RL: ARG (Analytical reagent use); ANST (Analytical study); USES

## (Uses)

(development of sensor system for fluorimetric detn. of heavy metals in water using)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

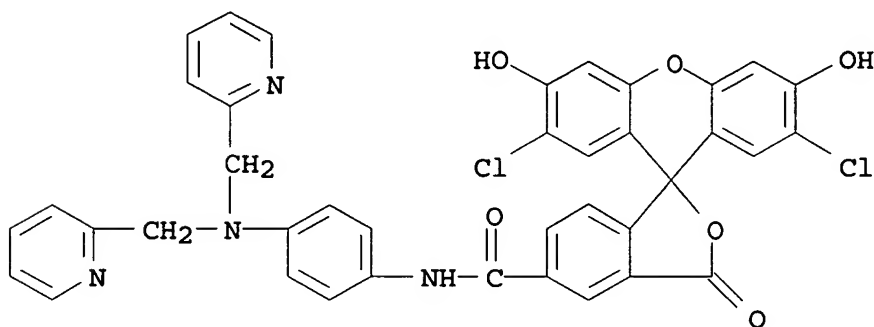
L13 ANSWER 22 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:592904 HCAPLUS  
 DOCUMENT NUMBER: 133:174257  
 TITLE: Combined en bloc staining and embedding process  
 INVENTOR(S): Kerschmann, Russell L.  
 PATENT ASSIGNEE(S): Resolution Sciences Corporation, USA  
 SOURCE: PCT Int. Appl., 12 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000049383	A1	20000824	WO 2000-US1953	20000126
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG EP 1155300 A1 20011121 EP 2000-905746 20000126 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO JP 2002537554 T2 20021105 JP 2000-600075 20000126 PRIORITY APPLN. INFO.: US 1999-253607 A 19990219 WO 2000-US1953 W 20000126				

AB The invention features a method for en bloc staining and embedding a

sample, including the steps of (a) immersing the sample in a staining soln. contg. a dye that binds reversibly to a component of the sample, and (b) embedding the sample in an embedding medium, wherein the dye is no more than 50 % as sol. in the embedding medium as it is in the staining soln.

IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study);  
USES (Uses)  
(Newport Green; combined en bloc staining and embedding process)  
RN 288374-37-8 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)

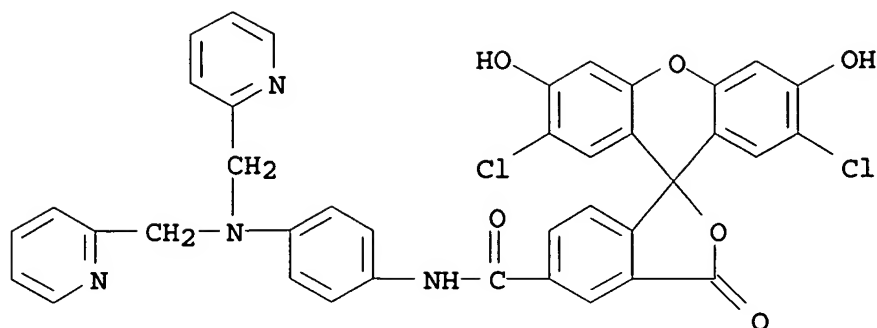


● 2 K

IC ICM G01N001-30  
ICS G01N001-36  
CC 9-4 (Biochemical Methods)  
IT 288374-37-8, Newport Green  
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study);  
USES (Uses)  
(Newport Green; combined en bloc staining and embedding process)  
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L13 ANSWER 23 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2000:208701 HCAPLUS  
DOCUMENT NUMBER: 132:344187  
TITLE: Detection of heavy metals in bacterial biofilms  
and microbial flocs with the fluorescent  
complexing agent Newport Green  
AUTHOR(S): Wuertz, S.; Muller, E.; Spaeth, R.; Pfleiderer,

P.; Flemming, H-C.  
CORPORATE SOURCE: Institute of Water Quality Control and Waste Management, Technical University of Munich, Garching, D-85748, Germany  
SOURCE: Journal of Industrial Microbiology & Biotechnology (2000), 24(2), 116-123  
CODEN: JIMBFL; ISSN: 1367-5435  
PUBLISHER: Nature Publishing Group  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The complexing agent Newport Green fluoresces upon binding of nickel, zinc, or cobalt. It was used to detect nickel or zinc in MOPS buffer, in gel-like matrixes, and in natural biofilms and microbial flocs cultivated in the lab. The response curves for increasing nickel concns. indicated an equimolar binding capacity of Newport Green for nickel in MOPS buffer, whereas zinc fluorescence reached satn. in the presence of a 10-fold excess of zinc ions relative to Newport Green mols. The max. fluorescence intensity as detd. by luminometry was 8-fold and 4-fold above background for nickel and zinc, resp. The response of Newport Green to either nickel or zinc in the presence of the other metal is consistent with a different binding affinity of Newport Green for the 2 metals. Zinc binds more strongly to the complexing agent than nickel but it leads to a weaker fluorescent signal which was detectable by luminometry but not by confocal laser scanning microscopy (CLSM). Newport Green was able to complex nickel in the presence of 1% gelatin or agarose as detd. by CLSM and image processing. Its application to fully hydrated bacterial biofilms or microbial flocs revealed the presence of nickel outside of cells. The results suggest that in addn. to cellular sorption, metals are bound extracellularly by extracellular polymeric substances in intact and undisturbed microbial aggregates.  
IT 288374-37-8, Newport Green  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(detection of heavy metals in bacterial biofilms and microbial flocs with fluorescent complexing agent Newport Green)  
RN 288374-37-8 HCAPLUS  
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

CC 4-1 (Toxicology)  
 Section cross-reference(s): 10  
 IT 288374-37-8, Newport Green  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (detection of heavy metals in bacterial biofilms and microbial  
 flocs with fluorescent complexing agent Newport Green)  
 REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L13 ANSWER 24 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:405112 HCAPLUS  
 DOCUMENT NUMBER: 131:56155  
 TITLE: Methods for the simultaneous identification of  
 novel biological targets and lead structures for  
 drug development using combinatorial libraries  
 and probes  
 INVENTOR(S): Heefner, Donald L.; Zepp, Charles M.; Gao, Yun;  
 Jones, Steven W.  
 PATENT ASSIGNEE(S): Sepracor Inc., USA  
 SOURCE: PCT Int. Appl., 125 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9931267	A1	19990624	WO 1998-US26894	199812 18

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,

DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,  
 IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,  
 MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
 SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW  
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,  
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2314422 AA 19990624 CA 1998-2314422

199812  
18

AU 9919256 A1 19990705 AU 1999-19256

199812  
18

EP 1049796 A1 20001108 EP 1998-964053

199812  
18

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO

JP 2002508507 T2 20020319 JP 2000-539165

199812  
18

PRIORITY APPLN. INFO.:

US 1997-68035P P

199712  
18

WO 1998-US26894 W

199812  
18

AB The combinatorial screening assays and detection methods of the present invention encompass highly diversified libraries of compds. which act as fingerprints to allow for the identification of specific mol. differences existing between biol. samples. The combinatorial screening assay and detection methods of the present invention utilize highly diversified libraries of compds. to interrogate and characterize complex mixts. in order to identify specific mol. differences existing between biol. samples, which may serve as targets for diagnosis of development of therapeutics. The invention is base, in part, on the design of sensitive, rapid, homogeneous assay systems that permit the evaluation, interrogation, and characterization of samples using complex, highly diversified libraries of mol. probes. The ability to run the high throughput assays in a homogeneous format increases sensitivity of screening. In addn., the homogeneous format allows the mols. which interact to maintain their native or active conformations. Moreover, the homogeneous assay systems of the invention utilize robust detection systems that do not require sepn. steps for detection of reaction products. The assays of the invention can be used for diagnostics, drug screening and discovery, target-driven discover, and in the field of proteomics and genomics for the identification of disease markers and drug targets.

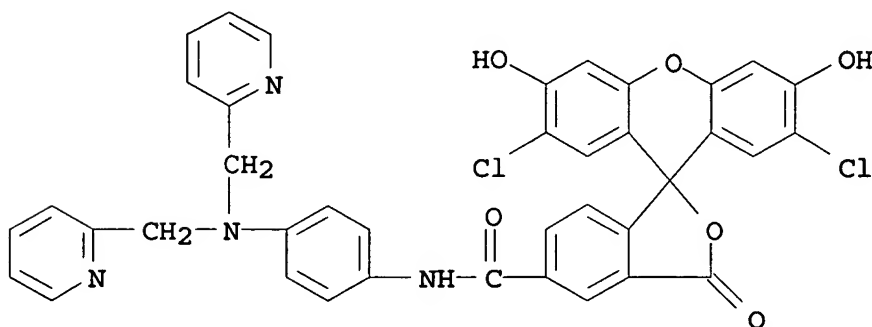
IT 288374-37-8, Newport Green

RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)

(identification of novel biol. targets and lead structures for drug development using combinatorial libraries and probes)

RN 288374-37-8 HCAPLUS

CN Spiro[isobenzofuran-1(3H), 9' - [9H]xanthene] -5-carboxamide, N-[4-[bis(2-pyridinylmethyl)amino]phenyl]-2',7'-dichloro-3',6'-dihydroxy-3-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

IC ICM C12Q001-00

ICS C12Q001-68; C12Q001-70; G01N033-53; G01N033-566; G01N033-567; G01N021-00; G01N021-76

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 1, 6, 13, 14

IT 50-06-6D, Phenobarbital, reaction products with fluorescein  
 50-67-9D, Serotonin, reaction products with coumarin, analysis  
 57-41-0D, Phenytoin, reaction products with fluorescein 58-55-9D,  
 Theophylline, reaction products with fluorescein 70-51-9D,  
 Desferrioxamine, reaction products with fluorescein 125-33-7D,  
 Primidone, reaction products with fluorescein 536-21-0D,  
 Norphenylephrine, reaction products with coumarin 1403-66-3D,  
 Gentamicin, reaction products with fluorescein 1404-90-6D,  
 Vancomycin, reaction products with fluorescein 1446-61-3D,  
 Dehydroabietylamine, reaction products with fluorescein and coumarin  
 6621-47-2D, Perhexiline, reaction products with fluorescein  
 11032-79-4D,  $\alpha$ -Bungarotoxin, reaction products with FITC  
 20350-15-6D, Brefeldin A, reaction products with BODIPY  
 32231-06-4D, 1-Piperonylpiperazine, reaction products with  
 fluorescein and coumarin 32795-44-1D, N-Acetylprocainamide,  
 reaction products with fluorescein 32986-56-4D, Tobramycin,  
 reaction products with fluorescein 37517-28-5D, Amikacin, reaction  
 products with fluorescein 66580-68-5D, Globotriose, reaction

products with fluorescein 70458-96-7D, Norfloxacin, reaction  
products with coumarin 74011-58-8D, Enoxacin, reaction products  
with coumarin 84031-84-5, Colchicine fluorescein 87134-87-0  
88641-41-2, Naloxone fluorescein 88641-43-4 107827-77-0  
121086-10-0, BODIPY FL-NAPS 121714-22-5, Fluo-3AM 134759-22-1,  
Fluorescein biotin 135243-34-4, BODIPY FL PPHT 137759-83-2  
138777-24-9, C 8FDG 151736-99-1, Cholesteryl-BODIPY FL C12  
155734-90-0, Fluorescein DHPE 168004-84-0 170516-42-4, Phen  
Green 175799-93-6, BODIPY FL-prazosin 195244-55-4, Sodium Green  
197460-05-2, Fluorescein methotrexate 212116-60-4, BODIPY  
FL-forskolin 216483-91-9, Ro 1986-BODIPY 216483-92-0, BODIPY  
FL-amiloride 216571-97-0, BODIPY FL-ABT 216571-98-1, BODIPY  
FL-bisindolylmaleimide 216571-99-2, BODIPY FL-thapsigargin  
216572-00-8, BODIPY FL-X ryanodine 216854-76-1, Dexamethasone  
fluorescein 217189-42-9, (+)-DM-BODIPY dihydropyridine  
217189-43-0, (-)-DM-BODIPY dihydropyridine 217189-44-1, BODIPY FL  
C12-galactocerebroside 220518-50-3, Fim-1 228111-69-1  
228111-70-4 228111-71-5 228265-61-0, BODIPY FL pirenzepine  
228265-62-1, BODIPY FL-CGP 12177 228265-63-2, BODIPY FL C12-MPP  
228265-94-9, BODIPY FL-Sch 23390 288374-37-8, Newport  
Green

RL: ARG (Analytical reagent use); ARU (Analytical role,  
unclassified); BPR (Biological process); BSU (Biological study,  
unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL  
(Biological study); PROC (Process); USES (Uses)

(identification of novel biol. targets and lead structures for  
drug development using combinatorial libraries and probes)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L13 ANSWER 25 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:115698 HCAPLUS

DOCUMENT NUMBER: 130:158504

TITLE: Colorimetric and fluorimetric methods for the  
determination of some antihistaminics using acid  
dyes and charge transfer techniques

AUTHOR(S): Karam, H.; El Kousy, N.; Towakkol, M.

CORPORATE SOURCE: National Organization for Drug Control and  
Research, Cairo, Egypt

SOURCE: Analytical Letters (1999), 32(1), 79-96

CODEN: ANALBP; ISSN: 0003-2719

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The acid dyes Eosin B and Tropeolin OO were used for the detn. of  
terfenadine, astemizole and acrivastine in the presence of McIlvain  
buffer of a suitable pH. The formed ion-pairs were extd. with  
chloroform and the absorbances were measured at 530-535 nm and 410  
nm in the case of Eosin B and Tropeolin OO, resp. In addn.  
terfenadine, astemizole and acrivastine were detd. fluorimetrically  
using Eosin B. The fluorescence intensity was measured at 480 nm

excitation and 555 nm emission. Conformity with Beer's law was evident over a concn. range of 2-20 µg/mL in the colorimetric methods and of 0.16-0.96 µg/mL in the fluorimetric methods. The charge transfer technique was also applied for the detn. of astemizole and acrivastine using iodine and 2,3-dichloro-5,6-dicyano-p-benzoquinone (DDQ). Absorbances were measured at 286 and 292 nm, resp., in the iodine method, and at 461 in the DDQ method. Conformity with Beer's law was evident over concn. range of 1-12 µg/mL and 20-200 µg/mL in iodine and DDQ methods resp. The precision of the proposed methods was tested by applying them for the detn. of pure samples of terfenadine, astemizole and acrivastine. The mean percentage recovery of terfenadine, astemizole and acrivastine lies in the range 99.49-100.72 in Eosin B method, 99.79-100.16 in Tropeolin OO method, 100.01-101.00% in the fluorimetric method. In the charge transfer methods the mean percentage recovery of astemizole and acrivastine lies in the range 99.61-100.40 and 100.02-100.30% in iodine and DDQ methods, resp. The proposed methods were successfully applied for the detn. of the drugs in their pharmaceutical dosage forms and their validities were ascertained by applying the std. addn. technique.

IT 220284-83-3

RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)

(colorimetric and fluorimetric methods for detn. of antihistaminics using acid dyes and charge transfer techniques)

RN 220284-83-3 HCAPLUS

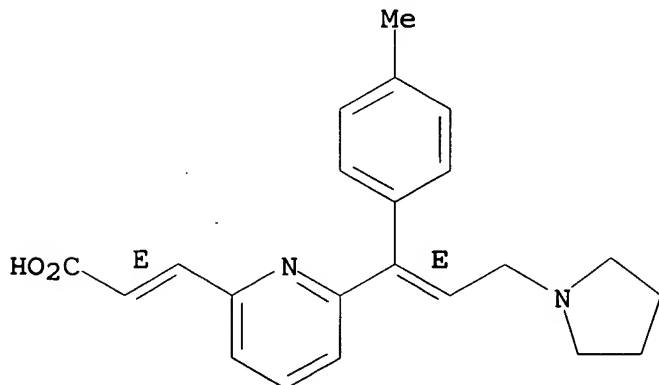
CN 2-Propenoic acid, 3-[6-[(1E)-1-(4-methylphenyl)-3-(1-pyrrolidinyl)-1-propenyl]-2-pyridinyl]-, (2E)-, compd. with 4',5'-dibromo-3',6'-dihydroxy-2',7'-dinitrospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one disodium salt (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 87848-99-5

CMF C22 H24 N2 O2

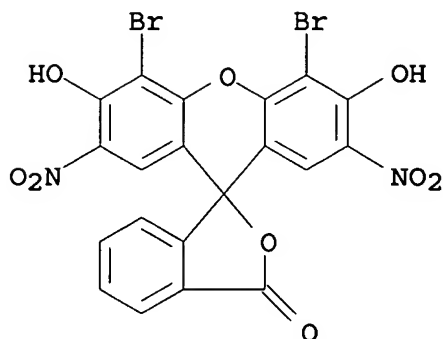
Double bond geometry as shown.



CM 2

CRN 548-24-3

CMF C20 H8 Br2 N2 O9 . 2 Na



●2 Na

CC 64-3 (Pharmaceutical Analysis)

IT 220284-71-9 220284-73-1 220284-75-3 220284-77-5 220284-79-7  
220284-81-1 220284-83-3 220284-85-5 220284-87-7  
220284-89-9

RL: FMU (Formation, unclassified); PRP (Properties); FORM  
(Formation, nonpreparative)

(colorimetric and fluorimetric methods for detn. of  
antihistaminics using acid dyes and charge transfer techniques)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L13 ANSWER 26 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:535598 HCAPLUS

DOCUMENT NUMBER: 127:220354

TITLE: Supramolecular donor-acceptor complexes of  
dichlorofluorescein and cis- and  
trans-4,4'-(N,N'-dimethylpyridinium)ethylene  
AUTHOR(S): Willner, Itamar; Marx-Tibbon, Sharon; Cohen,  
Shmuel; Eichen, Yoav; Kaftori, Menachem  
CORPORATE SOURCE: Institute of Chemistry and Farkas Center for  
Light-Induced Processes, The Hebrew University  
of Jerusalem, Jerusalem, 91904, Israel  
SOURCE: Journal of Physical Organic Chemistry (1997),  
10(6), 435-444  
CODEN: JPOCEE; ISSN: 0894-3230  
PUBLISHER: Wiley  
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Trans-4,4'-(N,N'-Dimethylpyridinium)ethylene [trans-(1)] and cis-4,4'-(N,N'-dimethylpyridinium)ethylene [cis-(1)] form with 2,7-dichlorofluorescein [DCF2-, (2)] donor-acceptor complexes of 1:1 stoichiometry [ $K(\text{trans-1})=14000 \text{ M}^{-1}$  and  $K(\text{cis-1})=300 \text{ M}^{-1}$  in water]. The lower affinity of cis-1 to form the donor-acceptor complex with DCF2-, (2), is attributed to the non-planar structure of cis-1 (tilt-angle between the pyridinium rings= $26^\circ$ ). The solid-state structure of the complex between DCF2- and trans-1 indicates alternate stacking of donor and acceptor units with an inter-layer spacing of 3.4 Å. Solubilization of the cryst. DCF2- and trans-1 complex in water or DMF results in the initial formation of a non-sym. complex where a trans-1 unit is inter-layered between two DCF2- components, and a second trans-1 unit is located externally to the supramol. assembly and participates in charge neutralization [(DCF2-)2...trans-1/trans-1]. The primary non-sym. complex is thermally transformed to a thermodynamically stable sym. complex where the DCF2- and trans-1 form a sandwich-type layered assembly [DCF2-...trans-1]. The structural features of the complexes were characterized by  $^1\text{H-NMR}$  spectroscopy. The kinetics of the transformation of the [(DCF2-)2...trans-1/trans-1] complex to the [DCF2-...trans-1] assembly was spectroscopically characterized in DMF ( $k=0.22\text{s}^{-1}$  at 322 K;  $E_a=20 \text{ kcal mol}^{-1}$ ).

IT 195063-20-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(crystallog.; supramol. donor-acceptor complexes of dichlorofluorescein and cis- and trans-4,4'-(N,N'-dimethylpyridinium)ethylene)

RN 195063-20-8 HCAPLUS

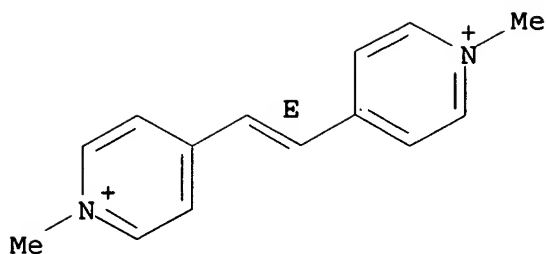
CN Pyridinium, 4,4'-(1,2-ethenediyl)bis[1-methyl-, diiodide, (E)-, compd. with 2',7'-dichloro-3',6'-dihydroxyspiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 24274-78-0

CMF C14 H16 N2 . 2 I

Double bond geometry as shown.

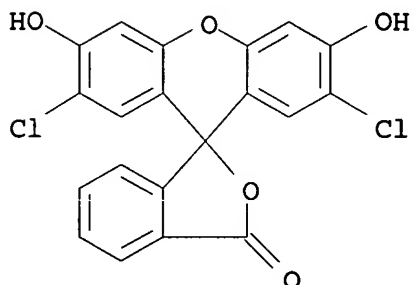


● 2 I<sup>-</sup>

CM 2

CRN 76-54-0

CMF C20 H10 Cl2 O5



CC 22-9 (Physical Organic Chemistry)

Section cross-reference(s): 75

IT 195063-20-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(crystallog.; supramol. donor-acceptor complexes of dichlorofluorescein and cis- and trans-4,4'-(N,N'-dimethylpyridinium)ethylene)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 27 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:505949 HCAPLUS

DOCUMENT NUMBER: 109:105949

TITLE: Fluorescence polarization immunoassay for the determination of nicotine

AUTHOR(S): Castro, Albert; Monji, Nobuo

CORPORATE SOURCE: Sch. Med., Univ. Miami, Miami, FL, 33177, USA

SOURCE: Biochemical Archives (1988), 4(2), 77-84  
CODEN: BIAREM; ISSN: 0749-5331

DOCUMENT TYPE: Journal

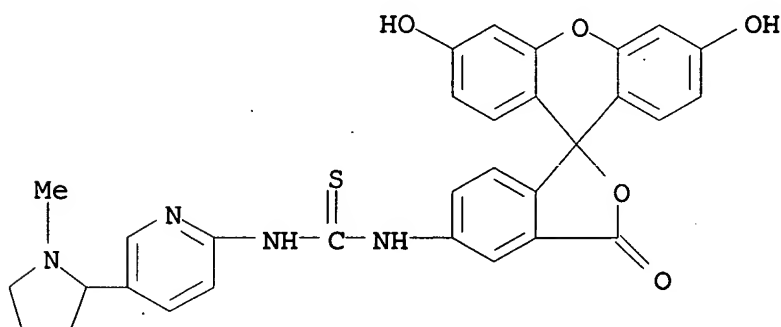
LANGUAGE: English

AB Racemic aminonictoine was used a functionalized hapten to produce nicotine antibodies suitable for nicotine detns. in such samples as blood or urine. These antibodies were produced from antigens in which both flexible and semirigid chains serve to couple racemic 6-aminonicotine to bovine serum albumin. Using antibodies produced against (R,S)-6-( $\epsilon$ -aminocapramido)nicotine and using fluorescein labeled nicotine, a competitive immunoassay for nicotine was developed via fluorescence polarization techniques. The sensitivity was 90  $\mu$ g/L.

IT 116209-53-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for nicotine detn. by fluorescence polarization immunoassay)

RN 116209-53-1 HCAPLUS

CN Thiourea, N-(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)-N'-[5-(1-methyl-2-pyrrolidinyl)-2-pyridinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

CC 4-1 (Toxicology)

IT 116209-53-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for nicotine detn. by fluorescence polarization immunoassay)

L13 ANSWER 28 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

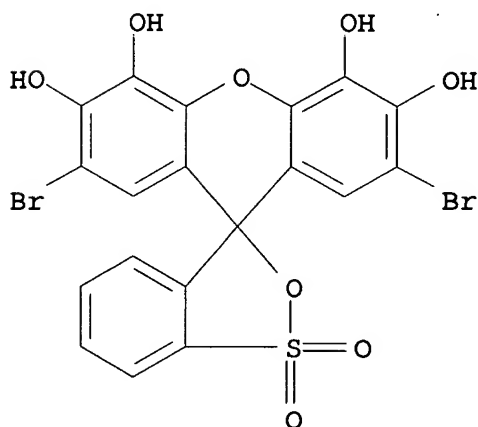
ACCESSION NUMBER: 1984:193514 HCAPLUS

DOCUMENT NUMBER: 100:193514

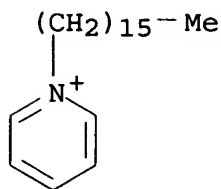
TITLE: Reaction of bromopyrogallol red with cetylpyridinium chloride

AUTHOR(S): Mustafin, D. I.; Kostromina, N. A.; Sivanova, O.

V.; Gribov, L. A.  
CORPORATE SOURCE: USSR  
SOURCE: Teoreticheskaya i Eksperimental'naya Khimiya  
(1984), 20(1), 20-5  
CODEN: TEKHA4; ISSN: 0497-2627  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
AB The <sup>1</sup>H NMR spectra of bromopyrogallol red, cetylpyridinium chloride, and their 1:2 compd. [89989-34-4] were studied and conformational maps were made to det. the nature of the interaction. These show that the interaction bears a local character and causes changes of geometrical parameters of only those groups participating directly.  
IT 89989-34-4  
RL: PRP (Properties)  
(structure and conformation of, NMR in relation to)  
RN 89989-34-4 HCAPLUS  
CN Pyridinium, 1-hexadecyl-, chloride, compd. with 2',7'-dibromospiro[3H-2,1-benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol 1,1-dioxide (2:1) (9CI) (CA INDEX NAME)  
CM 1  
CRN 16574-43-9  
CMF C19 H10 Br2 O8 S



CM 2  
CRN 123-03-5  
CMF C21 H38 N . Cl



● Cl<sup>-</sup>

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 22, 46, 79

IT 89989-34-4

RL: PRP (Properties)

(structure and conformation of, NMR in relation to)

L13 ANSWER 29 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:477781 HCAPLUS

DOCUMENT NUMBER: 99:77781

TITLE: Effect of cationic surfactants on the nature of hydration and some properties of triphenylmethane compounds in aqueous solutions

AUTHOR(S): Chernova, R. K.; Amelin, V. G.; Shtykov, S. N.

CORPORATE SOURCE: Sarat. Univ., Saratov, USSR

SOURCE: Zhurnal Fizicheskoi Khimii (1983), 57(6), 1482-5  
CODEN: ZFKHA9; ISSN: 0044-4537

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB A viscometric method was used to establish the type of hydration of triphenylmethane anions and their assoc. with cetylpyridinium. Assocn. with cetyl pyridinium cations leads to changes in hydration state from hydrophilic to hydrophobic. The transition is explained in terms of changes in the protolytic properties of the triphenylmethane anions.

IT 86670-73-7

RL: PRP (Properties)

(hydration properties of, viscometric study of)

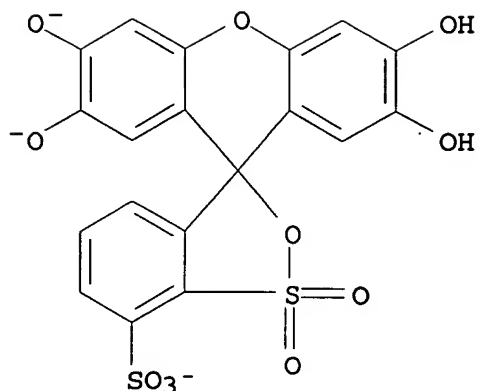
RN 86670-73-7 HCAPLUS

CN Pyridinium, 1-hexadecyl-, salt with 2',3',6',7'-tetrahydroxyspiro[3H-2,1-benzoxathiole-3,9']-[9H]xanthene]-7-sulfonic acid 1,1-dioxide (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 86670-71-5

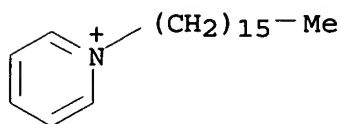
CMF C19 H9 O11 S2



CM 2

CRN 7773-52-6

CMF C21 H38 N



CC 68-6 (Phase Equilibriums, Chemical Equilibriums, and Solutions)

IT 67733-92-0 86670-72-6 86670-73-7

RL: PRP (Properties)

(hydration properties of, viscometric study of)

L13 ANSWER 30 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:227129 HCAPLUS

DOCUMENT NUMBER: 98:227129

TITLE: Mixed-ligand complexes of titanium, zirconium, and hafnium with bromopyrogallol red and cetylpyridinium bromide

AUTHOR(S): Kovaleva, L. V.; Ganago, L. I.

CORPORATE SOURCE: Inst. Fiz. Tverd. Tela Poluprovodn., Minsk, USSR

SOURCE: Vestsi Akademii Navuk BSSR, Seryya Khimichnykh Navuk (1983), (2), 3-7

CODEN: VBSKAK; ISSN: 0002-3590

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Ti was detd. in its alloys with V by a spectrophotometric method involving dissoln. in HNO<sub>3</sub>-H<sub>2</sub>SO<sub>4</sub>, boiling the soln. down until the appearance of SO<sub>3</sub> fumes, treating an aliquot contg. 30-70 µg Ti by bromopyrogallol red (I), cetylpyridinium (II) bromide, ascorbic acid, a pH 3 buffer, and 1M HCl solns., and measuring the absorbance

at 630 nm. V(IV) 800-fold molar amt. did not interfere. The relative error was 3.80% for detg. 0.63% Ti. The spectra of the 1:2 I-II ion assoc. were recorded. The molar absorptivities and conditional stability consts. of mixed-ligand of Ti, Zr, and Hf with I and II bromide were detd. in acidic media (1M HCl-pH 3.0). They ranged from  $2.50 \times 10^4$  to  $3.90 \times 10^4$  and from  $1.14 \times 10^{18}$  to  $1.06 \times 10^{20}$ , resp.

IT 74684-10-9

RL: PRP (Properties)  
(spectra of)

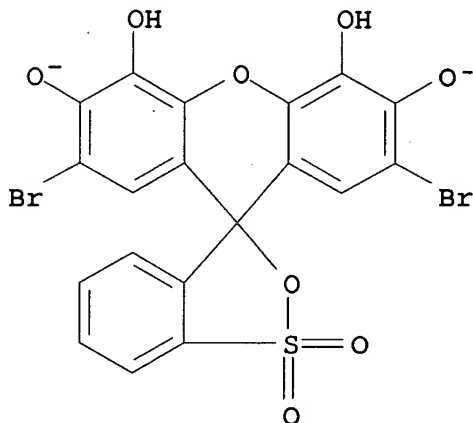
RN 74684-10-9 HCAPLUS

CN Pyridinium, 1-hexadecyl-, salt with 2',7'-dibromospiro[3H-2,1-benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol 1,1-dioxide (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 74684-09-6

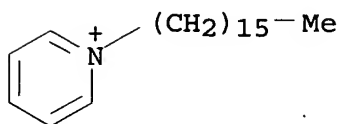
CMF C19 H8 Br2 O8 S



CM 2

CRN 7773-52-6

CMF C21 H38 N



CC 79-6 (Inorganic Analytical Chemistry)  
Section cross-reference(s): 68, 78

IT 74684-10-9  
RL: PRP (Properties)  
(spectra of)

L13 ANSWER 31 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1981:588809 HCAPLUS  
DOCUMENT NUMBER: 95:188809  
TITLE: Inks for felt pens  
PATENT ASSIGNEE(S): Sakura Color Products Corp., Japan  
SOURCE: Jpn. Tokkyo Koho, 9 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 56028945	B4	19810704	JP 1973-48701	197304 28
PRIORITY APPLN. INFO.:			JP 1973-48701	A 197304 28

AB Dyes having carboxylate or sulfonate groups react with hexadecylpyridinium chloride (I), dodecylpicolinium chloride, or a similar compd. to prep. coloring agents which are dissolved in aliph. hydrocarbon solvents and/or alcs. to prep. inks. Thus, a red ink comprised C.I. Acid Red 87-I complex [79728-65-7] 15, a hydrogenated rosin pentaerythritol ester 16, mineral spirit 55, and EtOH 14 parts.

IT 79728-65-7

RL: USES (Uses)  
(pigments, for felt pen inks)

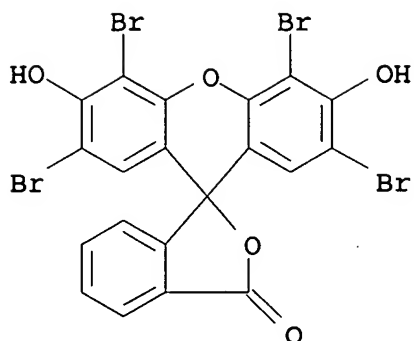
RN 79728-65-7 HCAPLUS

CN Pyridinium, 1-hexadecyl-, chloride, compd. with 2',4',5',7'-tetrabromo-3',6'-dihydroxyspiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one disodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 17372-87-1

CMF C20 H8 Br4 O5 . 2 Na

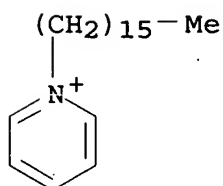


● 2 Na

CM 2

CRN 123-03-5

CMF C21 H38 N . Cl



● Cl<sup>-</sup>

IC C09D011-16

CC 42-12 (Coatings, Inks, and Related Products)

IT 79728-65-7

RL: USES (Uses)

(pigments, for felt pen inks)

L13 ANSWER 32 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1981:156104 HCAPLUS

DOCUMENT NUMBER: 94:156104

TITLE: Steric and electron structures, electrostatic potentials of some xanthene derivatives and products of their reaction with cetylpyridinium

AUTHOR(S): Mustafin, D. I.; Gribov, L. A.; Sivanova, O. V.

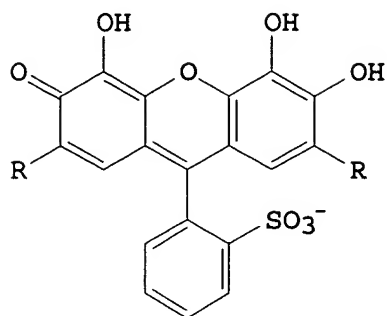
CORPORATE SOURCE: Fiz.-Khim. Inst. im. Karpova, Moscow, USSR

SOURCE: Doklady Akademii Nauk SSSR (1980), 255(2), 361-4  
[Chem.]  
CODEN: DANKAS; ISSN: 0002-3264

DOCUMENT TYPE: Journal

LANGUAGE: Russian

GI



I

AB Calcns. by the atom-atom potential method indicated that pyrogallol red (I, R = H) and bromopyrogallol red (I, R = Br) preferred a conformation with perpendicular benzene and xanthene ring systems. Formation of the 2-cetylpyridinium salts of I did not appreciably alter the geometry but did cause considerable changes in local electrostatic potentials.

IT 77254-03-6 77254-04-7

RL: PRP (Properties)

(conformation and electrostatic potentials of)

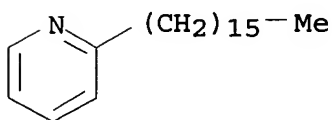
RN 77254-03-6 HCAPLUS

CN Spiro[3H-2,1-benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol, 1,1-dioxide, compd. with 2-hexadecylpyridine (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 77254-02-5

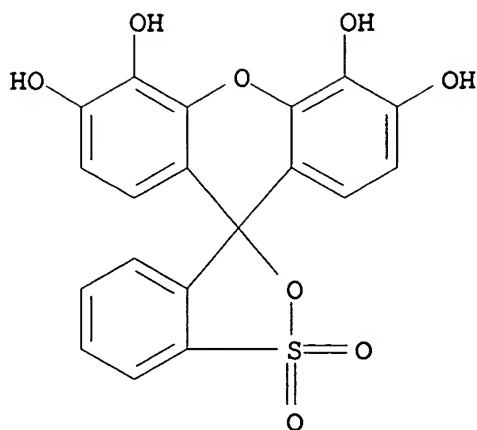
CMF C21 H37 N



CM 2

CRN 32638-88-3

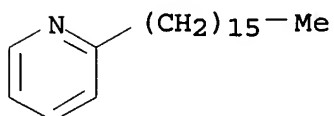
CMF C19 H12 O8 S



RN 77254-04-7 HCAPLUS  
 CN Spiro[3H-2,1-benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol,  
 2',7'-dibromo-, 1,1-dioxide, compd. with 2-hexadecylpyridine (1:2)  
 (9CI) (CA INDEX NAME)

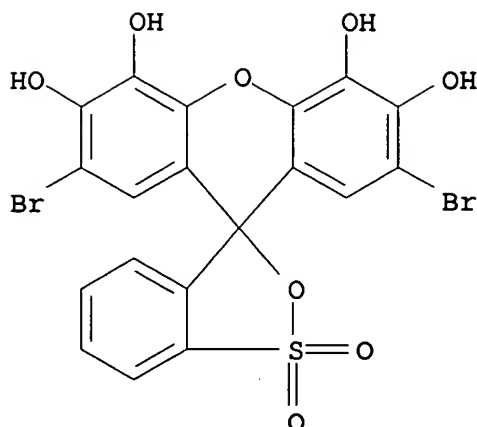
CM 1

CRN 77254-02-5  
 CMF C21 H37 N



CM 2

CRN 16574-43-9  
 CMF C19 H10 Br2 O8 S



CC 22-8 (Physical Organic Chemistry)

Section cross-reference(s): 79

IT 77254-03-6 77254-04-7

RL: PRP (Properties)

(conformation and electrostatic potentials of)

L13 ANSWER 33 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1981:57540 HCAPLUS

DOCUMENT NUMBER: 94:57540

TITLE: Ionic associate complex of uranium(VI),  
bromopyrogallol red, and cetylpyridinium bromide  
in pentanol

AUTHOR(S): Koch, Siegfried; Ackermann, Gerhard

CORPORATE SOURCE: Sekt. Chem., Bergakad. Freiberg, Freiberg, Ger.  
Dem. Rep.

SOURCE: Zeitschrift fuer Chemie (1980), 20(12), 449-50  
CODEN: ZECEAL; ISSN: 0044-2402

DOCUMENT TYPE: Journal

LANGUAGE: German

AB An extn.-spectrophotometric method for detg. U(VI) is based on the  
extn. of its ion assoc. with bromopyrogallol red and cetylpyridinium  
bromide at pH 7.5 into isopentanol. The absorbance of the blue ion  
assoc. was measured at 630 nm. The molar absorptivity was 20.580  
+ 103. Beer's law was obeyed up to 286 µg U. The  
interference of several metal ions was investigated.

IT 76378-54-6

RL: PRP (Properties)

(spectrum of)

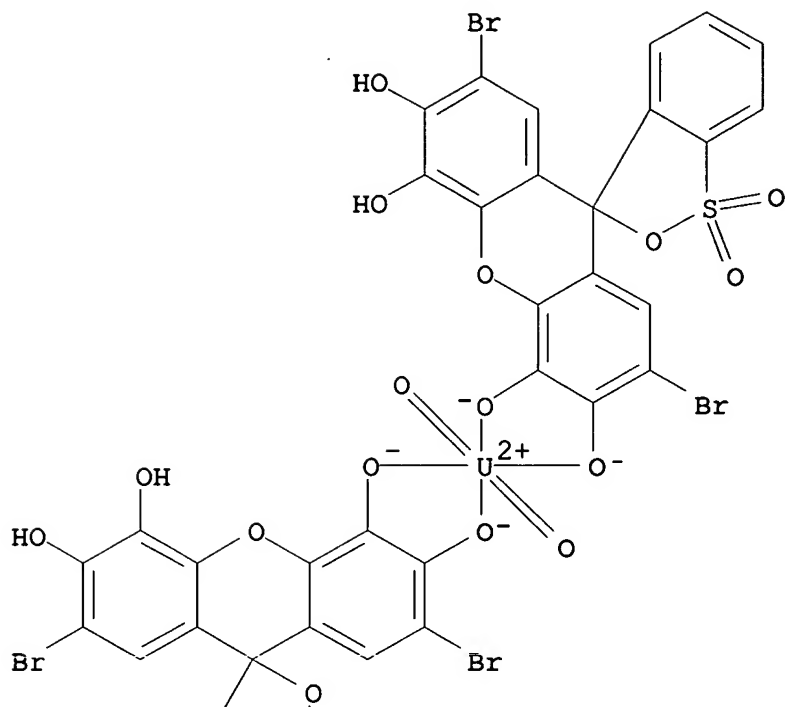
RN 76378-54-6 HCAPLUS

CN Pyridinium, 1-hexadecyl-, bis[2',7'-dibromospiro[3H-2,1-  
benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol  
1,1-dioxidato(2-)-O3',O4']dioxouranate(2-) (2:1) (9CI) (CA INDEX  
NAME)

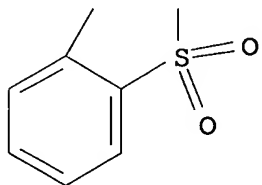
CM 1

CRN 76378-53-5  
CMF C38 H16 Br4 O18 S2 U  
CCI CCS

PAGE 1-A

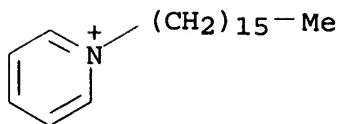


PAGE 2-A



CM 2

CRN 7773-52-6  
CMF C21 H38 N



CC 79-6 (Inorganic Analytical Chemistry)

IT 76378-54-6

RL: PRP (Properties)  
(spectrum of)

L13 ANSWER 34 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:578885 HCAPLUS

DOCUMENT NUMBER: 93:178885

TITLE: Reaction between molybdenum(VI) and  
bromopyrogallol red in presence of  
cetylpyridinium chloride

AUTHOR(S): Savvin, S. B.; Chernova, R. K.; Beloliptseva, G.  
M.

CORPORATE SOURCE: V. I. Vernadskii Inst. Geochem. Anal. Chem.,  
Moscow, USSR

SOURCE: Zhurnal Analiticheskoi Khimii (1980), 35(6),  
1128-37

CODEN: ZAKHA8; ISSN: 0044-4502

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The interaction of Mo(VI) with bromopyrogallol red (I) was studied  
in the presence and absence of cetylpyridinium chloride (II). Mo  
reacts with I to form 2 products with Mo/I molar ratios of 1:1 and  
1:2 and with absorbance max. at 540 and 630 nm, resp. In the  
presence of II a complex is formed with a Mo/I/II molar ratio of  
1:2:2. The possibility of using this reaction in the detn. of Mo in  
steel and biol. materials was studied over a wide acidity range (pH  
10 to 5M H<sub>2</sub>SO<sub>4</sub>). For steel anal., a calibration curve is linear for  
0.08-1.4 µg Mo/mL. Ca, Mg, Zn, Ni, Co, and Mn do not interfere;  
W does. The interference of Fe(III) is eliminated by the addn. of  
ascorbic acid.

IT 75200-09-8

RL: PRP (Properties)  
(spectra of)

RN 75200-09-8 HCAPLUS

CN Pyridinium, 1-hexadecyl-, bis[2',7'-dibromospiro[3H-2,1-  
benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol  
1,1-dioxidato(2-)-O3',O4']dioxomolybdate(2-) (2:1) (9CI) (CA INDEX  
NAME)

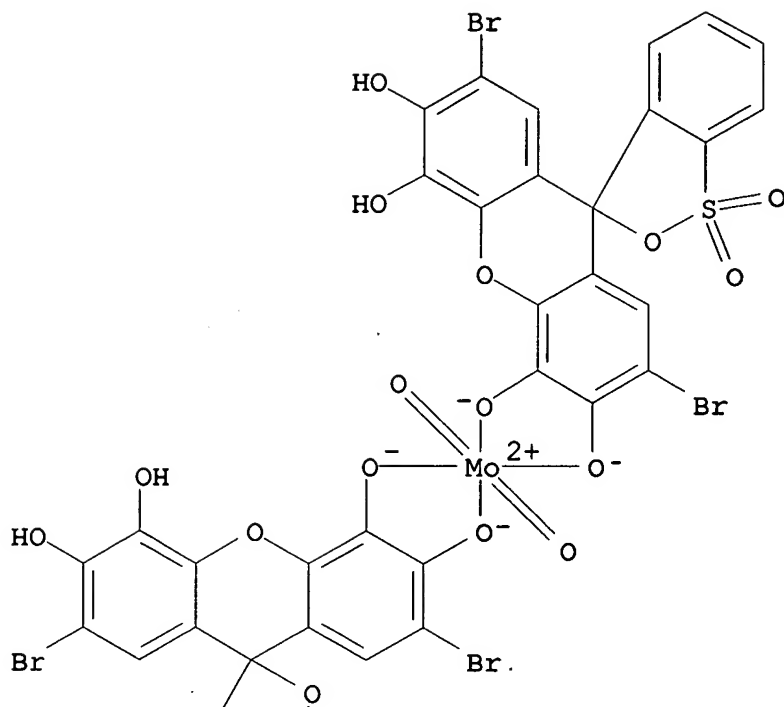
CM 1

CRN 75200-08-7

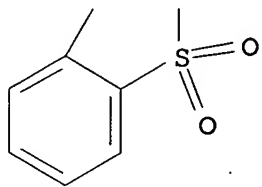
CMF C38 H16 Br4 Mo O18 S2

CCI CCS

PAGE 1-A



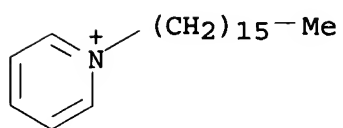
PAGE 2-A



CM 2

CRN 7773-52-6

CMF C21 H38 N



CC 79-6 (Inorganic Analytical Chemistry)

IT 75193-24-7 75200-09-8

RL: PRP (Properties)  
(spectra of)

L13 ANSWER 35 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:502187 HCAPLUS

DOCUMENT NUMBER: 93:102187

TITLE: An associate ion complex of bromopyrogallol red  
and cetylpyridinium bromide in an aqueous  
solution

AUTHOR(S): Koch, Siegfried; Ackermann, Gerhard

CORPORATE SOURCE: Sekt. Chem., Bergakad. Freiberg, Freiberg, Ger.  
Dem. Rep.

SOURCE: Zeitschrift fuer Chemie (1980), 20(6), 228-9

CODEN: ZECEAL; ISSN: 0044-2402

DOCUMENT TYPE: Journal

LANGUAGE: German

AB Photometric study showed interaction at pH 5, but not at pH 2. The  
assocn. equil. is formulated as  $H_3A^- + 2B^+ \rightleftharpoons B_2H_2A + H^+$  ( $H_4A$   
= bromopyrogallol. red;  $B^+$  = cetylpyridinium). The equil. const. at  
22° and ionic strength 0.1 (NaClO<sub>4</sub>) is  $9.5 \times 10^{-4}$ .

IT 74684-10-9P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of)

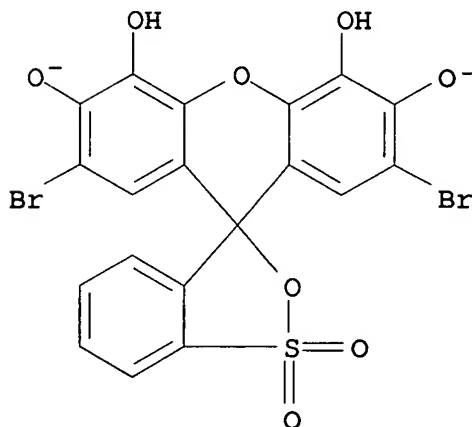
RN 74684-10-9 HCAPLUS

CN Pyridinium, 1-hexadecyl-, salt with 2',7'-dibromospiro[3H-2,1-  
benzoxathiole-3,9'-[9H]xanthene]-3',4',5',6'-tetrol 1,1-dioxide  
(2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 74684-09-6

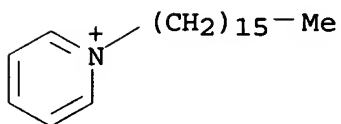
CMF C19 H8 Br2 O8 S



CM 2

CRN 7773-52-6

CMF C21 H38 N



CC 68-2 (Phase Equilibriums, Chemical Equilibriums, and Solutions)

IT 74684-10-9P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of)

L13 ANSWER 36 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1979:114319 HCAPLUS

DOCUMENT NUMBER: 90:114319

TITLE: Mechanism of action of cationic surfactants in  
organic reagent-metal ion-surfactant systemsAUTHOR(S): Savvin, S. B.; Chernova, R. K.; Belousova, V.  
V.; Sukhova, L. K.; Shtykov, S. N.CORPORATE SOURCE: V. I. Vernadskii Inst. Geochem. Anal. Chem.,  
Moscow, USSRSOURCE: Zhurnal Analiticheskoi Khimii (1978), 33(8),  
1473-80

CODEN: ZAKHA8; ISSN: 0044-4502

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The formation of dye-surfactant ion assoc. and metal-dye-surfactant chelates was studied with cationic surfactants enhancing the sensitivity and spectral contrast of the reactions of anionic dyes used as spectrophotometric reagents for detg. metals. The dye-surfactant ion assoc. and the metal-dye-surfactant chelates arise from specific interactions of the reactants at concns. lower than the crit. micelle concn. The absorption spectra of some ion assoc. and chelates are discussed. The stoichiometric ratios of the components were detd. for several color reaction products.

IT 69295-39-2

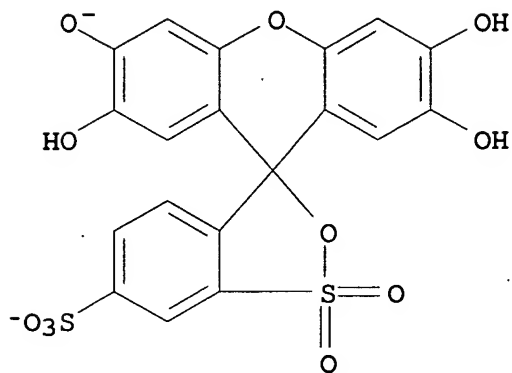
RL: PRP (Properties)  
(spectrum of)

RN 69295-39-2 HCAPLUS

CN Pyridinium, 1-hexadecyl-, salt with 2',3',6',7'-tetrahydroxyspiro[3H-2,1-benzoxathiole-3,9']-[9H]xanthene]-6-sulfonic acid 1,1-dioxide (2:1) (9CI) (CA INDEX NAME)

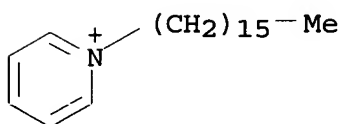
CM 1

CRN 69295-38-1  
CMF C19 H10 O11 S2



CM 2

CRN 7773-52-6  
CMF C21 H38 N



CC 79-1 (Inorganic Analytical Chemistry)  
Section cross-reference(s): 40, 46, 66  
IT 69175-60-6 69275-95-2 69276-03-5 69295-37-0 69295-39-2  
69295-40-5 69487-03-2  
RL: PRP (Properties)  
(spectrum of)

L13 ANSWER 37 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1977:453578 HCAPLUS  
DOCUMENT NUMBER: 87:53578  
TITLE: Aminoacyl derivatives of nucleosides,  
nucleotides, and polynucleotides. 16.  
Synthesis of dipeptidyl-tRNA with fluorescent  
labels  
AUTHOR(S): Aleksandrova, L. A.; Kutuzova, T. M.; Kraevskii,  
A. A.; Kukhanova, M. K.; Gottikh, B. P.  
CORPORATE SOURCE: Inst. Mol. Biol., Moscow, USSR  
SOURCE: Izvestiya Akademii Nauk SSSR, Seriya  
Khimicheskaya (1977), (3), 647-53  
CODEN: IASKA6; ISSN: 0002-3353  
DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB R-X-OSu (I; R = dansyl,  $\beta$ -anthracenylsulfonyl,  $\alpha$ -naphthylaminocarbonyl, fluoresceinylaminothiocarbonyl; X = Gly, Ala, Val, Phe; Su = succinimido) were prepd. by condensation of R-X-OH with HOSu by dicyclohexylcarbodiimide. Treatment of  $^{14}\text{C}$ -labeled Phe-tRNA with I yielded dipeptidyl-tRNA with fluorescent labels.

IT 63553-78-6

RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation reaction of, with hydroxysuccinimide)

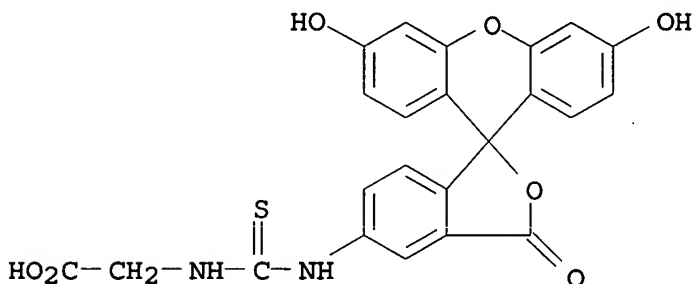
RN 63553-78-6 HCAPLUS

CN Glycine, N-[[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)amino]thioxomethyl]-, compd. with pyridine (9CI)  
(CA INDEX NAME)

CM 1

CRN 120375-99-7

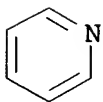
CMF C23 H16 N2 O7 S



CM 2

CRN 110-86-1

CMF C5 H5 N



CC 34-3 (Synthesis of Amino Acids, Peptides, and Proteins)  
Section cross-reference(s): 6, 9, 33

IT 63553-78-6 63553-80-0

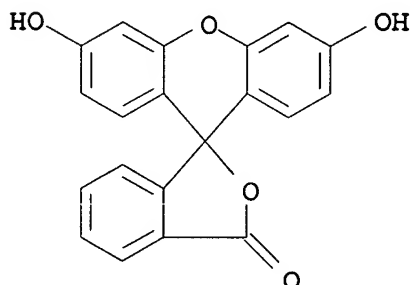
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation reaction of, with hydroxysuccinimide)

L13 ANSWER 38 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1915:471 HCAPLUS

DOCUMENT NUMBER: 9:471  
ORIGINAL REFERENCE NO.: 9:74b  
TITLE: The colorless addition products of fluorescein  
with quinoline and pyridine  
AUTHOR(S): Oddo, Bernardo  
SOURCE: Ber. (1914), 47, 2433  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB Fischer and Hoffmann (C. A. 8, 2721) state that O. has not analyzed  
the above derivs. but O. states that this data was given in an  
earlier paper (C. A. 6, 341).  
IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)  
RN 846604-85-1 HCAPLUS  
CN Pyridine, compd. with fluorescein (1CI) (CA INDEX NAME)

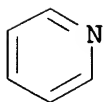
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CRN 2321-07-5  
CMF C20 H12 O5



CM 2

CRN 110-86-1  
CMF C5 H5 N



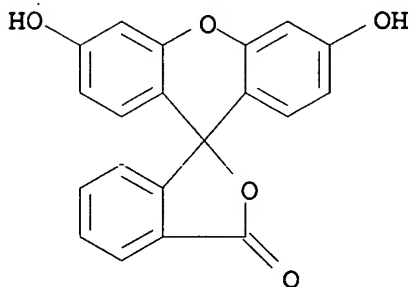
CC 10 (Organic Chemistry)  
IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)

L13 ANSWER 39 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1915:470 HCAPLUS  
DOCUMENT NUMBER: 9:470

ORIGINAL REFERENCE NO.: 9:74b  
TITLE: The colorless addition products of fluorescein  
with quinoline and pyridine  
AUTHOR(S): Oddo, Bernardo  
CORPORATE SOURCE: Univ. Pavia  
SOURCE: Gazzetta Chimica Italiana (1914), 44(I), 713  
CODEN: GCITA9; ISSN: 0016-5603  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB Fischer and Hoffmann (C. A. 8, 2721) state that O. has not analyzed  
the above derivs. but O. states that this data was given in an  
earlier paper (C. A. 6, 341).  
IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)  
RN 846604-85-1 HCAPLUS  
CN Pyridine, compd. with fluorescein (1CI) (CA INDEX NAME)

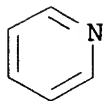
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CRN 2321-07-5  
CMF C20 H12 O5



CM 2

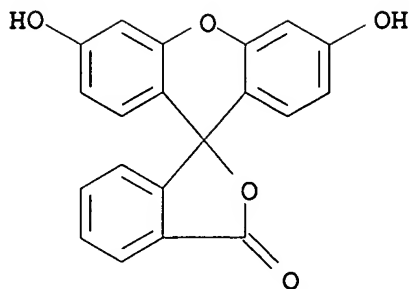
CRN 110-86-1  
CMF C5 H5 N



CC 10 (Organic Chemistry)  
IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)

L13 ANSWER 40 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1915:469 HCAPLUS

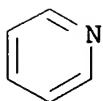
DOCUMENT NUMBER: 9:469  
ORIGINAL REFERENCE NO.: 9:73g-i,74a-b  
TITLE: Pyrrole group. XI. The action of tertiary  
pyrroles on magnesyl compounds  
AUTHOR(S): Oddo, Bernardo  
SOURCE: Ber. (1914), 47, 2427-32  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB cf. C. A. 8, 1272. The lack of a reaction between tertiary pyrroles and Grignard's reagent has previously been pointed out by O. In fact, heterocyclic compds. with imide H (indole, carbazole, pyrrole, pyridine, etc.) give addition products with RMgI (Atti accad. Lincei 13, II, 100; Gazz. 37, I, 514). Hesse and Wissing (Ber. 39, 773; 40, 1487) state that N-C<sub>4</sub>H<sub>4</sub>Nme reacts with EtMgBr in Et<sub>2</sub>O to give mol. amts. of C<sub>2</sub>H<sub>6</sub> and the Mg deriv. α-C<sub>4</sub>H<sub>4</sub>NMgX (a). It was thought that the C<sub>2</sub>H<sub>6</sub> was due to the action of unmethylated pyrrole. O. has prep'd. pure N-methylpyrrole (b) and found that it does not evolve C<sub>2</sub>H<sub>6</sub> with EtMgBr. (b) was prep'd. by the method of Ciamician and Dennstedt (Gazz. chim. ital. 17, 134) by the action of MeI on K pyrrolate at ordinary pressure under a condenser on a H<sub>2</sub>O bath (not in the sealed tube as was done by C. and D.). The material obtained by steam distn. was ext'd. with Et<sub>2</sub>O and gave a product b. 110-20°. This product was treated several times with small bits of metallic K to remove C<sub>4</sub>H<sub>5</sub>N and finally b. 112-3°. 5 g. of this (b) in 2 vols. of Et<sub>2</sub>O treated with EtMgBr in Et<sub>2</sub>O in a suitable app. evolved no gas either in the cold or on the b. H<sub>2</sub>O bath. (b) was recovered unchanged. The above mixture, treated with a slow stream of CO<sub>2</sub>, gave EtCO<sub>2</sub>MgBr and (b) instead of N,α-C<sub>4</sub>H<sub>3</sub>NMeCO<sub>2</sub>H, if (a) had been present as stated by H. and W. It was claimed by H. and W. that the N,CC<sub>4</sub>H<sub>3</sub>NMeAc was formed by the action of AcCl on (a). O. found that AcCl acting directly on (b) gives this deriv. either in the presence or absence of solvents. N-C<sub>4</sub>H<sub>4</sub>NBz was also prep'd. and was found not to have any action on Et<sub>2</sub>O solns. of EtMgBr. In all expts. no C<sub>2</sub>H<sub>6</sub> was evolved until H<sub>2</sub>O was added.  
IT 846604-85-1, Pyridine, comp'd. with fluorescein  
(prepn. of)  
RN 846604-85-1 HCAPLUS  
CN Pyridine, comp'd. with fluorescein (1CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 2321-07-5  
CMF C20 H12 O5



CM 2

CRN 110-86-1

CMF C5 H5 N



CC 10 (Organic Chemistry)

IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)

L13 ANSWER 41 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1915:468 HCAPLUS

DOCUMENT NUMBER: 9:468

ORIGINAL REFERENCE NO.: 9:73g-i,74a-b

TITLE: Pyrrole group. XI. The action of tertiary  
pyrroles on magnesyl compounds

AUTHOR(S): Oddo, Bernardo

CORPORATE SOURCE: Univ. Pavia

SOURCE: Gazzetta Chimica Italiana (1914), 44(I), 706-13  
CODEN: GCITA9; ISSN: 0016-5603

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

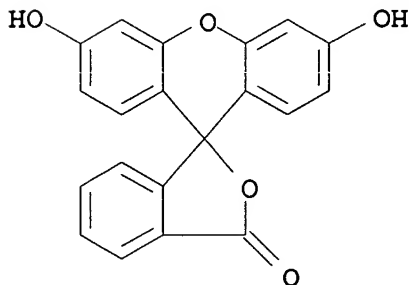
AB cf. C. A. 8, 1272. The lack of a reaction between tertiary pyrroles and Grignard's reagent has previously been pointed out by O. In fact, heterocyclic compds. with imide H (indole, carbazole, pyrrole, pyridine, etc.) give addn. products with RMgI (Atti accad. Lincei 13, II, 100; Gazz. 37, I, 514). Hesse and Wissing (Ber. 39, 773; 40, 1487) state that N-C<sub>4</sub>H<sub>4</sub>Nme reacts with EtMgBr in Et<sub>2</sub>O to give mol. amts. of C<sub>2</sub>H<sub>6</sub> and the Mg deriv. α-C<sub>4</sub>H<sub>4</sub>NMgX (a). It was thought that the C<sub>2</sub>H<sub>6</sub> was due to the action of unmethylated pyrrole. O. has prepd. pure N-methylpyrrole (b) and found that it does not evolve C<sub>2</sub>H<sub>6</sub> with EtMgBr. (b) was prepd. by the method of Ciamician and Dennstedt (Gazz. chim. ital. 17, 134) by the action of MeI on K pyrrolate at ordinary pressure under a condenser on a H<sub>2</sub>O bath (not

in the sealed tube as was done by C. and D.). The material obtained by steam distn. was extd. with Et<sub>2</sub>O and gave a product b. 110-20°. This product was treated several times with small bits of metallic K to remove C<sub>4</sub>H<sub>5</sub>N and finally b. 112-3°. 5 g. of this (b) in 2 vols. of Et<sub>2</sub>O treated with EtMgBr in Et<sub>2</sub>O in a suitable app. evolved no gas either in the cold or on the b. H<sub>2</sub>O bath. (b) was recovered unchanged. The above mixt., treated with a slow stream of CO<sub>2</sub>, gave EtCO<sub>2</sub>MgBr and (b) instead of N,α-C<sub>4</sub>H<sub>3</sub>NMeCO<sub>2</sub>H, if (a) had been present as stated by H. and W. It was claimed by H. and W. that the N,CC<sub>4</sub>H<sub>3</sub>NMeAc was formed by the action of AcCl on (a). O. found that AcCl acting directly on (b) gives this deriv. either in the presence or absence of solvents. N-C<sub>4</sub>H<sub>4</sub>NBz was also prepd. and was found not to have any action on Et<sub>2</sub>O solns. of EtMgBr. In all expts. no C<sub>2</sub>H<sub>6</sub> was evolved until H<sub>2</sub>O was added.

IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)  
RN 846604-85-1 HCAPLUS  
CN Pyridine, compd. with fluorescein (1CI) (CA INDEX NAME)

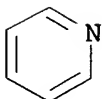
CM 1

CRN 2321-07-5  
CMF C20 H12 O5



CM 2

CRN 110-86-1  
CMF C5 H5 N



CC 10 (Organic Chemistry)  
IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)

L13 ANSWER 42 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1914:18545 HCAPLUS

DOCUMENT NUMBER: 8:18545

ORIGINAL REFERENCE NO.: 8:2721c-e

TITLE: Colorless addition products of quinoline and pyridine to fluorescein

AUTHOR(S): Fischer, O.; Hoffmann, W.

CORPORATE SOURCE: Univ. Erlangen

SOURCE: Ber. (1914), 47, 1578-9

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB When to fluorescein in 10 parts quinoline is added 3-4 vols. Et<sub>2</sub>O and some petroleum ether, the mixt. shaken, filtered rapidly from the yellow ppt. and allowed to cool, colorless prisms of an addition product, C<sub>10</sub>H<sub>12</sub>O<sub>5</sub>.3C<sub>9</sub>H<sub>7</sub>N sep.; after 24 hrs. in vacuo over H<sub>2</sub>SO<sub>4</sub> they had become only superficially yellow; after 4 days more they were found to have lost 1 mol. C<sub>9</sub>H<sub>7</sub>N; at 100°, they quickly became intensely yellow and lost all the C<sub>9</sub>H<sub>7</sub>N. C<sub>5</sub>H<sub>3</sub>N yields a similar addition product; it loses its C<sub>5</sub>H<sub>5</sub>N much more easily. Ordinary yellow fluorescein is therefore either an equil. mixt. of much yellow quinoid with little colorless lactone, the latter being fixed by the bases, or, more probably, the 2 solvents partially rearrange the quinoid into the lactone form, the latter being stable only in their presence and reverting to the quinoid when they evap. off.

IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)

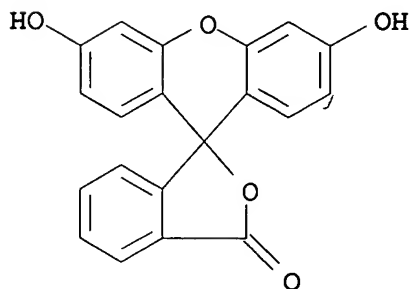
RN 846604-85-1 HCAPLUS

CN Pyridine, compd. with fluorescein (1CI) (CA INDEX NAME)

CM 1

CRN 2321-07-5

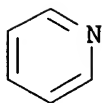
CMF C20 H12 O5



CM 2

CRN 110-86-1

CMF C5 H5 N



CC 10 (Organic Chemistry)

IT 846604-85-1, Pyridine, compd. with fluorescein  
(prepn. of)

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